

small air forces observer

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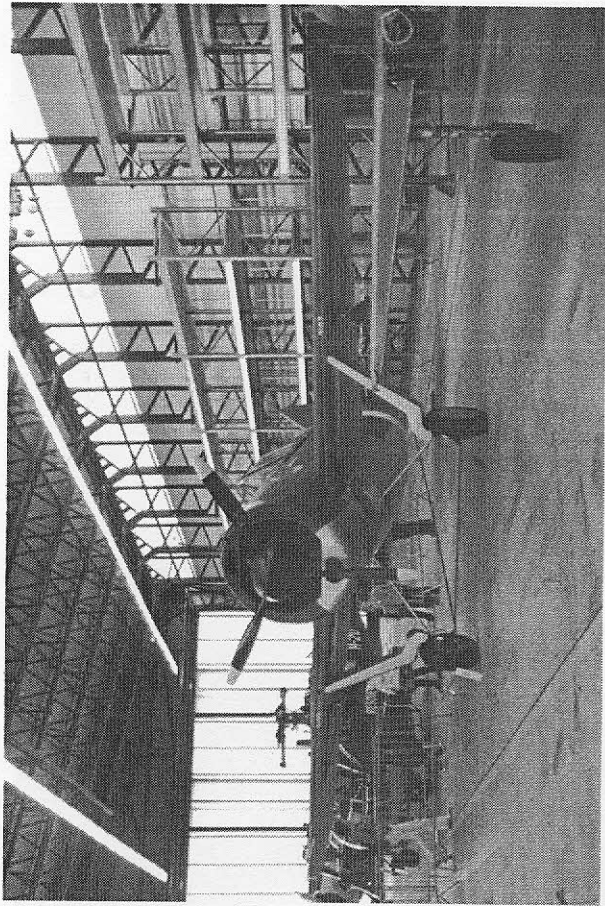
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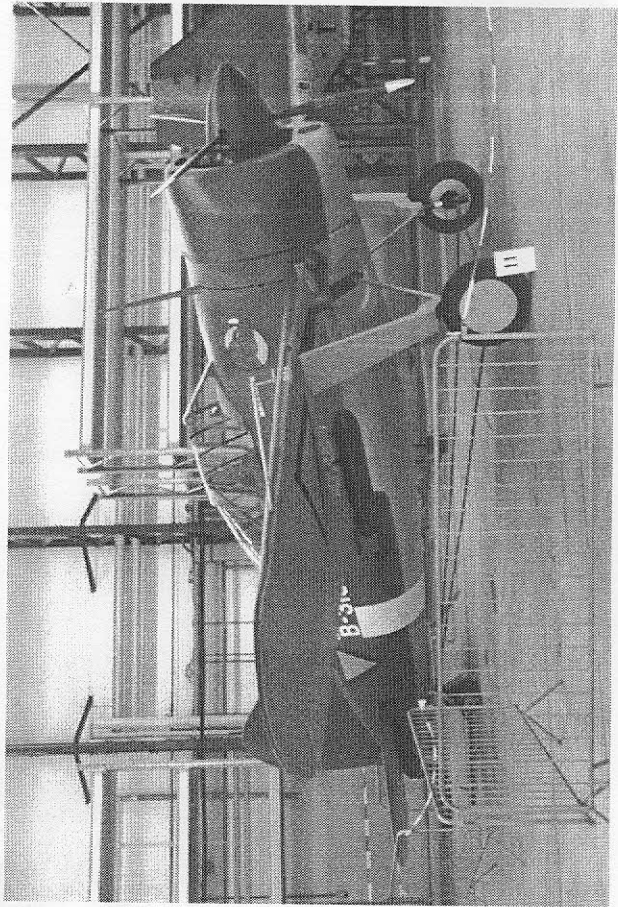
Air War over Ruthenia: Hungary vs. Slovakia (Part 2)
North American T-6 in the Congo (Part 2)
Dutch Museum Reproduction Buffalo
Ecuador Piper Aztec & Comanche

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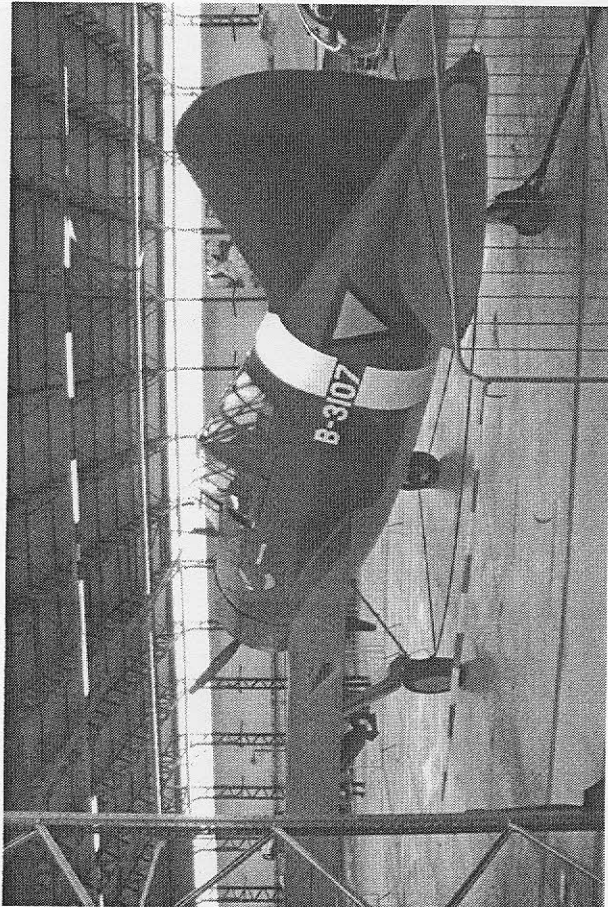
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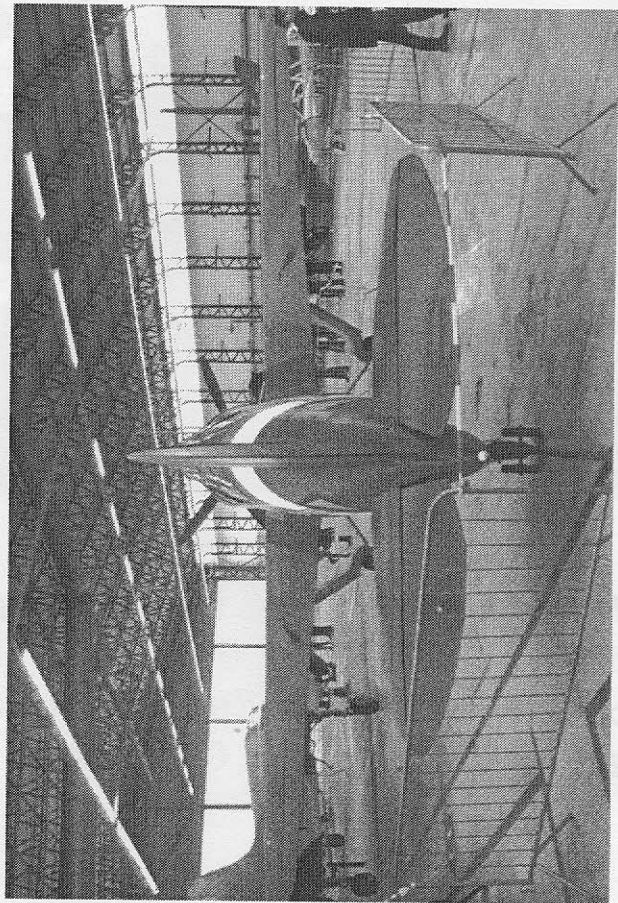
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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

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COVER COMMENTS:

A total of 126 Weiss WM-21 "Sólyom" ("Falcon") were built by the Hungarian company of Manfred Weiss. (Archive Laszlo Javor)

Captions for Photos on Pages 53-56

1. A multi-purpose Letov Š-328 biplane before take-off on a Czechoslovak airfield in August 1937. (Archive Bohumir Kudlicka)
2. A Letov Š-328 reconnaissance aircraft without regimental markings. (Archive Bohumir Kudlicka)
3. On this Letov S-328 of the Slovak flying corps, there are no squadron markings. (Archive Bohumir Kudlicka)
4. The Avia B.534 had a much better performance than Fiat C.R.32, but the Slovak pilots didn't make use of this advantage. (Archive Bohumir Kudlicka)
5. The burned out wreck of an Avia B-534. (Archive Bohumir Kudlicka)
6. A number of Avia B-534 brought together at a Slovak airfield during the mobilization of the Czechoslovak Army in the autumn 1938. (Archive Bohumir Kudlicka)
7. The Weiss WM-16 "Budapest" observation plane was developed from the Fokker C.V and was delivered to the MKHL in 1933. As obsolete, it was taken out of service in 1939. (Archive Laszlo Javor)
8. This Heinkel He 70K (He 170A) of 1/2 Őnálló távfelderítőszázad "Gólya" ("Stork") was one of 18 aircraft of this type that served with the Magyar Királyi Honvéd Légierő from 1937 to 1942. (Archive Laszlo Javor)
9. At the end of the 1930's, the Fiat C.R.32 was the standard fighter of the Magyar Királyi Honvéd Légierő. (Archive Laszlo Javor)
10. The pilot of a Fiat C.R.32bis of 1/3 Vadászszázad "Puma" poses besides his machine. (Archive Laszlo Javor)
11. This Fiat C.R.32bis (V-095) of 1/3 Vadászszázad "Puma" of the Magyar Királyi Honvéd Légierő had previously served with the Austrian Air Force till the annexation of Austria by the III. Reich in March 1938. (Archive Laszlo Javor)
12. 1/3 Vadászszázad "Puma" took little part in the hostilities with Slovakia due to the extremely wet ground on its airfield near Csap. (Archive Laszlo Javor)
13. Hungarian airmen relax near a Junkers Ju-86K-2, photographed at Topolca airfield. (Archive Laszlo Javor)
14. A Junkers Ju 86K-2 of 3/5 Bombázószázad "Bomba Matyi" based in Szombathely. (Archive Laszlo Javor)
15. During the conflict in Ruthenia, the Junkers Ju 86K-2 was the standard bomber of the Magyar Királyi Honvéd Légierő. (Archive Laszlo Javor)
16. A Junkers Ju 86K-2 of 2/3 Bombázószázad "Buzogány" ("Winged Mace"), parked on an airfield. (Archive Laszlo Javor)

AUSTRALIA

AUSTRALIAN PLASTIC MODELLERS ASSOCIATION

(APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$40. International payment is best handled via Paypal at iansharvyn@bigpond.com.au. Web Site: www.apma.org.

1-10 (26 pages) Color photos: RAN Sea Venom & Gannet (2). "DHA-3 Drover" 5 pages with 9 photos (one in color). "Dutch B-25 in WWII and beyond" 5 pages including 5 profile drawings of B-25 in Dutch markings and 4 photos (one in color) of a museum B-25 in Indonesian markings. "Northrop KD2-5 Shelduck" 2 pages on RAN radio-controlled drone including 3 photos and 3-view scale drawing.

AUSTRIA

ÖFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

2/10 (40 pages) Color photos: Austrian Skyvan '5SoTA' and Cessna L-19A '3AoCH'. "Finis Austriae Militare Skyvan" 3 pages including 8 photos. "Die Lloyd C.V (WKF) de Bauseries 82" 7 pages including history of individual a/c and 8 photos.

BELGIUM

KIT (IPMS Belgium, c/o Michel Willot, dreve de Champagne 14, B-1190 Bruxelles; French & Flemish. International Postal Money Order for \$30 for 4 issues. This is a great magazine with 4 pages of color. I only wish I had paid more attention in French class.]

#157 1/2010 (52 pages) "Hawker Hurricane Mk.I" 4 pages on building the 1/144-scale Sweet model including 7 photos and a profile drawing of a Belgian Mk.I. "Schneider Grunau 'Baby' IIB" 9 pages on building the 1/48-scale Ardpol kit including 10 photos. "Grunau Baby III Walk Around" 6 pages with 28 photos.

#158 2/2010 (52 pages) "BAC TSR.2" 4 pages on building the 1/48-scale Airfix kit in Belgian (What If?) markings including 15 photos. "BAC TSR.2 Walk Around" 4 pages of the TSR.2 at the RAF Museum, Cosford, UK, with 30 photos. "La Tortue de Da Vinci" 4 pages on building the 1/72-scale Retrotracks kit of Da Vinci's

6-gun armored vehicle including 9 photos. [Ed: I know it's not a flying machine, but nevertheless it's real neat.] "DHC.1 Chipmunk T-10" 8 pages on history and on building the 1/72-scale Airfix kit in Belgian markings including 12 photos of real thing and 5 photos of the completed model. "Chipmunk Mk.20 Walk Around" 4 pages with 19 photos of a Chipmunk of the Academia da Forca Aerea Portuguesa, Sintra AB, Feb. 2002. "Port-en-Bessin, 6 June 1944" 5 pages including 22 photos of a neat little diorama in 1/76-scale of a Deep Wading Brengun Carrier landing on D-Day. [Ed: Again, no apologizes for inclusion of a creepy-crawler in the abstracts.]

FRANCE

AVIONS: Toute l'Aeronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues). Website: www.avions-bateaux.com. E-mail: contact@avions-bateaux.com.

#176 Juillet-août 2010 (72 pages) Entire issue devoted to Las As de la Seconde Guerre Mondiale. "Tommy McGuire, Monsieur: huit derriere" 11 pages including 26 photos, victory list, & 4 color profile drawings (P-38). "Jean Demozay: un héros modeste et exemplaire" 14 pages including 17 photos, victory list, & 4 color profile drawings [Hurricane (2) & Spitfire (2)]. "Gehard Barkhorn: 301 victoires sur le front de l'Est" 14 pages including 32 photos, victory list, & 6 color profile drawings [Bf 109 (5) & Fw 190]. "Urho Lehtovaara: Les plus grand as sur MS 406 était Finlandais!" 7 pages including 11 photos, victory list, & 3 color profile drawings [MS406 (2) & Bf 109]. "Slim' Yarra, l'as de Malta" 7 pages including 11 photos, victory list, & 2 color profile drawings (Spitfire). "Kazuo Tsunoda, jusqu'au bout sur Zero" 7 pages including 19 photos, & 4 color profile drawings [A5M2 & A6M (3)]. "Vasilii Mikhalev, Héros de l'Union Soviétique" 7 pages including 10 photos, victory list, & 5 color profile drawings [I-15bis, Yak-7B, & P-39Q (3)]. "Info-Maquettes & Livres" 2 pages with reviews of 7 kits, 3 decal sets, & 6 books.

#177 Septembre-octobre 2010 (72 pages) "100 ans d'Aéronavale" 11 pages including 34 b&w photos. "Du Blériot XI

au Rafale" 3 pages with 12 color photos of 100th year celebration.. "Les Henschel 126 du 14 mai 1940" 14 pages including 20 photos and one color profile drawings (MS.406). "Le Farman 190 et ses dérivés (1)" 16 pages including 18 photos, one color 5-view drawing, and 8 color profile drawings. Six militarized F.195 went to Venezuela. "Souvenir d'une section de l'aviation populaire: Coulommiers 1936-1939" 6 pages including 6 photos (Caudron C.275 Luciole, Potez 60, & Salmson D.6 Cri-Cri). "Georges Raynaud, pilote ministériel (1)" 12 pages including 36 photos (Breguet 14, Caudron 59, MS 35, FBA 17, Bernard HV 42, & Potez 25). "Le centre d'aviation maritime de Camaret 1917-1918. Une unité de première ligne (2)" 6 pages including 8 photos (Tellier, Donnet-Denhaut, & Georges-Lévy seaplanes.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlief Billig, Oraniendamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

#29 Maj 2010 (11 pages) "Libyens Luftwaffe" 34 pages, one map showing airfields, a table listing current inventory, 4 color drawings showing evolution of the nation insignia, and 102 photos (T-33, C-47, F-5A, Jetstar, CH-47, C-130, L-39, L-410, SF.260, Soko G-2, AW109, Mirage 5, Mirage F.1, SA-321, Alouette III, An-26, An-32, An-72, An-74, An-124, Il-62, Il-76, MiG-21, MiG-23, MiG-25, Mi-8, Mi-14, Mi-25, Su-22, Su-24, & Tu-22). "Die Akademischen Fliegergruppen in Deutschland: Teil I" 20 pages on pre-WWII German gliders including 54 photos and 7 color profile drawings. "Kampfjets aus Schweden" Teil 2" 34 pages, 80 photos (mostly Swedish Saab 105, 37, and Gripen, but one each of Austrian 105, Norwegian & Pakistani MFI-9, and Hungarian Gripen. "Der Kleine Krieg zwischen Ungarn und der Slowakei" 22 pages on the March 1939 conflict between Hungary and Slovakia, including 49 photos, 2 very useful maps, and 5 color profile drawings (Hungarian He 70, CR.32, Ju 86; Slovak S-328, B-534). [Editor: This is the same article that appears in SAFO #133 and #134 but with more photos, maps, and color profiles].

IPMS Deutschland Journal. Website: ipmsdeutschland.de. Subscription: Europe 36 €; all others 40 €.

Jahrgang 43/1 (40 pages – all color)

“Dassault Super Etendard” 4 pages on building the 1/48-scale Airfix kit including 11 photos of the model in Argentine markings. “Northrop YB-49 Flying Wing” 6 pages on building the 1/72-scale Italeri kit including 19 photos of the model. “Fairey Swordfish Mk.I” 2 pages on building the 1/32-scale Trumpeter kit including 7 photos of the model. “Fieseler Fi 103A-1” 5 pages on building a diorama with the 1/72-scale MAC kit including 20 photos.

ITALY

JP4 Menslie di Aeronautica e Spazio.

Via XX Settembre, 60-50129 Firenze, Italy. Email: jp4@dueservice.com. Website: www.ediservice.it.

Giugno 2010 (100 pages) Color photo: Abu Dhabi Avro RJ100 ‘A6-AAB’. “A bordo della Garibaldi” 6 pages including 9 photos of Italian navy AV-8 Harriers. “BSDA 2010” 4 pages including 10 photos (Romanian Puma, IAR 99 Soim, An-30, C-27, & C-130). “Primo NH90 NFH alla Marina Olandese” 2 pages including 7 photos. “Incidenti Militari” 1 ½ pages including 5 photos (Spanish AB212ASW & South Korean Lynx).

Luglio 2010 (100 pages) “In volo con i P3 Flyers” 6 pages on Swiss acrobatic group flying Pilatus PC-3 a/c including 11 photos. “Incidenti Militari” 1 ½ pages including 5 photos (Turkish Cessna T-41D, Swiss PC-7, & Serb J-22 Orao.)

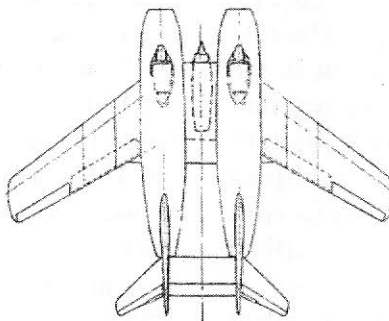
Agosto 2010 (100 pages) Color photos: Moroccan C-27J, Afghan G.222, Austrian C-130, Canadian C-130J, & Finnish F-18. “African Lion 2010” one page including 3 photos (Moroccan F-5). “Incidenti Militari” 1 ½ pages including 5 photos (Tanzanian Shenyang FT-5).

POLAND

LOTNICTWO (Krzysztof Zalewski, ul Grochowska 306/310, pok. 206, 03-840 Warszawa. E-mail: kz@magnum-x.pl.)

4/2010 (96 pages) Color photos: Zambia Xian MA60 and Netherlands Fokker 60MPA ‘U-03’. “ATR: 25 lat turbośmigłowego sukcesu” 7 pages including 11 photos (all civil except for a Thai Air Force ATR 72) and a 3-view drawing. “Forțele Aeriene Române” 9 pages including 17 fantastic photos [C-130H (2), An-30 (2), Puma (4 – one on a

full page), Jak-52 (2), L-39 Albatros (2), An-2 (2), MiG-21 Lancer, & Alouette III (2)]. “Alarm w Hyères!” 5 pages on French helicopters including 15 great photos [Lynx (3), Alouette III (2), Panther (one – plus a two-page centerfold), Super Frelon (2), Dauphin (7)]. “Bryjskie Phantomy” 6 pages including 14 photos and a 5-view scale drawing. “Dymitr Atanasow – 35 lat w bulgarskim lotnictwie” 9 pages including 16 photos (MiG-15, MiG-17, & L-60 Brygadie ‘LZ-B03’), two 2-view color drawings of Bulgarian UMIG-15MT fighter-bomber, and a drawings of a twin-fuselage, three-engine MiG-15. [Ed: A model of this “might-have-been” would be a sensation at your next model meeting. You can use two of that awful 1/72-scale Airfix kit – but I can’t, for the life of me, imagine what the landing gear would look like (Quadra cycle?).] “Ki-61 Hien (2)” 14 pages including 19 photos and 5 color profile drawings.



5.2010 (96 pages) Color photo: Zimbabwe K-8 Karakorum [Ed: It looks an awful like the Czech Aero L-39 Albatros.) “2. Pułk Lotniczy ‘Kraków’” 10 pages including 20 photos (Po-2, Il-10, MiG-15, and mostly Mig-21). “Samolot myśliwski Avia S-199 w Izraelu” 10 pages including 19 photos, victory list (2 Egyptian C-47 & 2 Spitfire, Syrian Harvard, & Jordanian Dragon Rapide), table listing history of all 24 Israeli S-199, and 4 color profile drawings.

6/2010 (96 pages) “MiG-25RB (cz.I)” 10 pages including 11 photos and a scale 5-view drawing. “Wyższa Szkoła Oficerska Sił Powietrznych” 6 pages including 15 photos. (TS-11, SW-4, Mi-2, M-28, & PZL-130) and a 2-page centerfold (PZL-130). “T-50 Golden Eagle rozwija skrzydła” 4 pages on South Korean T-50 including 9 photos. “Siły Powietrzne Szwecji 1935-1945” 12 pages including 23 photos and multiple tables. “2. Pułk

Lotniczy ‘Kraków’ (cz.II)” 10 pages including 21 photos (all Mig-21).

USA

SKYWAYS: The Journal of the Airplane 1920-1940 (PO Box 730, Red Hook, NY 12571. Website: ww1aeroinc.org. E-mail: subscriptions@worldwar1aeroinc.org. E-mail: ww1aero@gmail.com

#90 April 2010 (84 pages) “Curtiss Jenny Restoration” 5 pages including 10 photos. “Aviation in Newsreels” 6 pages including 10 photos. “Gee Bee R-1 – Part 2” 9 pages including 12 photos. “Register of the Davis-Monthan Aviation Field” 5 pages. “Caudron C.460” 9 pages including 10 photos and 2 pages of scale drawings. “Army Wing Stripes” 9 pages including 24 photos. “Blakesburg & Midwest Antique Airshows” 6 pages including 22 photos. “Dayton Wright RB Racer” 5 pages including 16 photos. “Scrapbook” 5 pages with 18 photos. “ID UKN” 2 pages including 5 photos. “Reproductions and Restorations” 2 pages including 6 photos. “Models” 4 pages including 16 photos. “Drawings” 2 pages with scale drawings of Thomas Morse MB-3 and Curtiss Condor.

#91 July, 201- (96 pages) “Italian Air Force Effectiveness between the Wars” 7 pages including 3 photos. “Stinson Model O” 5 pages including 15 photos. “Chamberlin’s Miss Stratosphere” 4 pages 6 including photos and a one-page scale drawing. “Great Lakes Reborn” 5 pages including 6 photos. “Martin MB-2 – National Museum of the USAF” 2 pages including 8 photos. “Martin MB-2 – Archaeologist Search for Wreckage” 3 pages including 3 photos. Consolidated P2Y-3 Details” 12 pages including 20 photos and a 3- page scale drawing. “Scrapbook” 6 pages including 24 photos. “Gee Bee Zeta” 7 pages including 25 photos. “Vintage Textbooks for the Aircraft Restorer” 2 pages. “The Story Behind the Birth of the Franklin Aircraft Engine” 2 pages. “Elinor Smith” 6 pages including one photo. “Models” 3 pages including 13 photos. “ID UNK” one page including a photo of an unidentified a/c with one full wing and 4 winglets, and a photo and sketch of the Skroback Flying Car that appears to have 5 wings in tandem. “Reproductions & Restorations” 3 pages including 12 photos. “DC-3 Excerpt from Book” 2 pages including photos.

The North American T-6 in Congolese Service

Part 2

Leif Hellström

[Author's note: The first part of this article, published in SAFO no. 128 (April 2009), chronicled the history of the T-6 in Congolese service up to mid 1964. Up to that time a total of ten T-6s and Harvards (T-6 will be used as a collective term for both of these) had been received from Belgian sources, some of them used in the Kwilu campaign in early 1964. By early June 1964, the six remaining flyable T-6s were assembled at N'Dolo airport in the capital Leopoldville, where they were out of service due to a lack of pilots. There were still no Congolese pilots and instead it was the CIA who furnished Cuban exile pilots to fly in the Congo. The Cubans were now in the process of finishing their contracts or re-training on the newly delivered T-28s and the T-6s were suddenly surplus to requirements. There were, however, two circumstances that led to a continuation of the T-6's service in the Congo. The first was that Italy set up a flying training operation in the Congo, and the second was that a new mercenary unit was formed to fly the T-6 as a light attack aircraft. These two units, the mercenary squadron and the flying school, were in many respects parallel activities with only limited interaction and will therefore be described separately, in this instalment and the next.]

By mid 1964, the Congo was in the grip of a violent rebellion. The small revolt in the Kwilu province had been contained, but a second and much more serious movement, known as the "Simba" rebellion, was spreading from the east. One political consequence was that Moïse Tshombe, former president of the secessionist Katanga province, was brought in as Prime Minister for the Congo on 30 June. He had previously used a lot of mercenaries in Katanga and soon set about introducing mercenaries also in the Congolese armed forces.

Tshombe had kept in touch with some of his former mercenary commanders during his time in exile, including South African Jeremiah "Jerry" Puren who had served in the Aviation Katangaise (Avikat). A few other former Avikat pilots had been on stand-by against a retainer. After only three weeks in office, Tshombe asked Puren to come to Leopoldville with some pilots and on 23 July Puren and his wife arrived with the British pilot James "Jimmy" Hedges and Rhodesian Erald "Flynn" Kingman. They were the very first of the mercenaries to sign up directly for the Congolese

Government, on six month contracts. In August 1964, a Lieutenant had a salary of 105,642 Franc (about US\$ 587), plus various allowances (typically another 65 per cent or so). The life or disability insurance was for up to one million Franc. A two week paid home leave was given after six months.

The pilots were left sitting in their hotel for some weeks, without being contacted by anyone from the Congolese side. This was probably because Tshombe was still hoping for a political solution to the rebellion and was still negotiating. Also, the US embassy quickly approached the Congolese government, voicing concern over the political reactions in Africa over the possible use of white, southern African mercenary pilots. The initial response was that Puren and his pilots were only there to assist in the return of former Avikat aircraft from Katanga and would not fly operations.

However, already on 22 July an agreement had been reached with the Italians that five of the six Harvard 4s they had delivered to the Congo would be diverted from the DICTMA mission (see next part this article) and armed with French Matra gun pods and rockets, just like the FAC T-6s flown by the Cubans earlier that year. In fact, at least some of the pods were in all likelihood stripped from the old T-6s parked at N'Dolo. The armament was fitted to the Harvard 4s by a Belgian Air Force team as the aircraft were assembled and ferried over to N'Dolo from N'Djili airport, each Harvard taking about ten days to arm. There was talk about Italy delivering six more T-6s for this purpose but the Italians were reluctant and no additional aircraft were delivered from there for use as strike aircraft.

Tshombe continued to have good contacts with the Portuguese and, as already mentioned, one of his priorities was to have Katangan military equipment, stored in Angola since 1963, returned to the Congo. This included four former Avikat T-6s. These aircraft had not been maintained, however, and the Portuguese instead chose to deliver replacement T-6s taken from Portuguese Air Force stocks in Angola. These four aircraft were all ex French T-6Gs, identifiable by a small extra air intake on the left side of the nose, and were flown to N'Dolo airport in Leopoldville by Portuguese pilots on 10 August 1964. The T-6Gs carried the same type of Matra gun pods already in use in the Congo.

There was still no-one to fly the T-6s, however, and Lt-Col. Eric Bouzin, the Belgian air advisor to the Congolese, therefore approached some of the Cubans flying T-28s for the CIA to ask if they would be willing to fly the T-6s as well. The Cuban chief pilot René García refused, saying they were only contracted to fly the T-28s, and also expressing some doubts about the maintenance standards of the T-6Gs.

At this point the military situation was becoming desperate and a rebel force was approaching Luluabourg, one of the province capitals. General Mobutu, the Congolese Chief of Staff, therefore turned to Puren and his men after all to fly two T-6s to Luluabourg for ground support. They now went to N'Dolo for the first time and inspected the T-6Gs (the Harvard 4s were not yet ready for operations). Like the Cubans, they found some problems with the aircraft but picked two of them, FA-079 and FA-090, for the mission. Kingman and Hedges, with Puren and another South African as passengers, took off for Luluabourg on 14 August, arriving the following day after a night stop at Kikwit. On arrival, Kingman landed downwind, overshot and ground-looped, wiping off the undercarriage of FA-079. The T-6 was never repaired and thus had a very short career with the FAC.

Kingman then took over FA-090 while Hedges returned to N'Dolo. Over the next week or two, Kingman flew several missions against rebel columns in the Lusambo area, sometimes with Puren as observer, and helped the ANC hinder the advance. The Simbas were finally turned back at Dimbelenge, 80 km (50 miles) from Luluabourg, and the T-6 returned to Leopoldville. FA-090 was re-serialised FB-090 shortly afterwards.

By the end of August, a few additional pilots started arriving. Some were South Africans, but there were also a number of Belgians, a couple of Frenchmen and a New Zealander. Even an Israeli turned up. Apart from Kingman's mission to Luluabourg there were no operations as yet, and the flying training was described as "desultory". A few T-6s also participated in a fly-over of the capital on 19 August to show off the strength of the FAC.

The unit was still unnamed but some of its members referred to it as "Ailes Chaka" ("The Wings of Chaka") after the famous Zulu king. As yet, the unit strength was not decided but in mid August it was reported that 24 T-6s was the "immediate anticipated level".

During a test flight of one of the first Harvard 4s to be ready for service after being armed, the unit suffered its second accident, this time fatal. A Belgian pilot,

Jacques "Jacky" Demoulin, was taking off for a check-out flight with the Israeli volunteer pilot Joseph Eschett from N'Dolo on 28 August 1964, when the aircraft crashed moments into its flight. A witness stated that it lifted off at an angle which seemed too steep for its speed and then stalled into a spin, hitting the ground after one and a half turns. Both crew members were killed and the aircraft, FB-808, totally destroyed. In his memoirs, Puren claims the crash was due to sabotage by a Congolese officer but there is nothing from any other source to support this statement.

The training picked up during September, with Jimmy Hedges as Training Officer. Several sorties were flown both in the morning and the afternoon and the training soon progressed to formation flying and tactical training. Each pilot flew at least once per day.

The T-6 unit was formally established on 1 October 1964, under the name 21ème Escadrille d'Appui Tactique (short form 21 Esc A.T.), which translates as 21st Tactical Support Squadron. In English, it was commonly referred to as just 21 Squadron, or 21 Sqn F.B. (for Fighter-Bomber). The squadron was officially subordinate to FATAC, the Belgian transport unit flying C-47s and H-21s from Kamina air base.

There has never been any explanation why the unit was named 21 Squadron; there were no other squadrons in the FAC at the time. Possibly it was chosen by Puren, who had served as a navigator in SAAF bombers during WWII; one of the SAAF bomber units was called 21 Squadron and perhaps this had been his old squadron.

21 Squadron was to be a "mobile" unit, with one or more operational flights of four T-6s each. Its original establishment was nine aircraft:

4 x ex Italian: Harvard 4s FB-782, FB-783, FB-809, FB-836

3 x ex Angolan: T-6Gs FB-043, FB-090, FB-743

2 x ex COGEA: Harvard 2B 9T-P46 and T-6C 9T-P31

COGEA was the Belgian company supplying T-6s to the Congo in 1962-1963, so the last two aircraft were survivors of the previous T-6 operation which were being restored to flying condition in the latter part of 1964. The other four ex COGEA aircraft were unserviceable, and of the two flyable ones, 9T-P31 was used only sparingly.

The technical staff of the squadron were a mixed bunch, with only a few fully qualified airplane mechanics, complemented by some mechanics transferred from the ground mercenaries and a number

of Congolese with limited training. Despite this, the rate of serviceability was normally fairly good. Some support was also provided by the Italian technicians of DICTMA and, probably for DICTMA record keeping purposes, all non-Italian 21 Squadron T-6s were in time given fictitious MM numbers. These began with 53 (like the Harvard 4s) followed by the FAC number, e.g. "MM 53743" for FB-743. This has caused considerable confusion among historians ever since, so let it be clearly understood that the 21 Squadron Harvard 2B, T-6C and T-6Gs were not former AMI aircraft, despite the MM numbers painted on some of them.

In early October, 21 Squadron was preparing for its first operational deployment, to the Coquilhatville area in north-western Congo. But by this time the US government was becoming increasingly concerned over the use of South African pilots and also feared that air operations too close to the city of Stanleyville might jeopardize the lives of the US hostages taken there by the rebels. Pressure was put on Tshombe to make him abandon the plans to deploy 21 Squadron and on 12 October he publicly stated that no South Africans would be used. Over the next few days General Mobutu said he would have Puren expelled and all South Africans grounded, and even agreed to demobilize 21 Squadron immediately. However, some preparations for the deployment to Coquilhatville still continued.

On 16 October, the US government stood down all CIA air support in the Congo, to put further pressure on the Congolese regarding 21 Squadron. Ironically, the Congolese had such poor communication channels that it took several days before anyone in Leopoldville noticed. When General Mobutu finally found out, he was livid and ordered 21 Squadron (including its South Africans) to deploy as soon as possible, and on 22 October the four Harvard 4s took off for Coquilhatville. The same day the CIA air support was reinstated and the Americans later admitted that the grounding had been a military and political mistake, which had prompted the deployment of 21 Squadron which would otherwise quite possibly have been disbanded.

The ground troops were advancing on Boende and on 24 October 1964, 21 Squadron flew its first "hot" mission, led by Belgian pilot Roger Bracco, to soften up the rebels in the town. No real targets were found, except a Volkswagen speeding out of town which was fired upon, and the Harvards were primarily providing moral support to the government troops who took Boende without resistance.

The Harvards redeployed to Boende on 27 October and from there they supported the continued offensive

towards Ikela. Once the town was taken, the four Harvards redeployed there on 6 November. The ground forces had to move some obstacles off the airfield before they could land. During this period when 21 Squadron was advancing along with the army, they might send some ground personnel ahead to scout for houses, etc., or else the ground troops would arrange something. There were no operating hotels at this time. The mechanics would come along in the backseat of the aircraft, on the last mission before the move, and would then be taken straight to the new airfield. The squadron did not have its own trucks, but had to rely on the ground units to move its equipment. At times the USAF would send a C-130 to help with the move.

The missions during this period were mainly in direct support of the ground offensive. Most of the missions were armed reconnaissance, often along roads ahead of the army columns. The T-6 pilots would check for ambushes, firing into suspicious areas along the road. Most of the time they probably did not hit anything but their mere presence was very demoralizing for the rebels, who lacked any means to deal effectively with the attackers, while at the same time boosting the morale of the government troops. Occasionally they would fire at vehicles or ferries, or fly air cover for helicopter missions.

During the last quarter of 1964, 21 Squadron was split into an "A" Flight and a "B" Flight, each nominally with four aircraft and able to operate independently. In practice, however, the squadron seldom put more than four T-6s in the field at any one time, and at no point more than six. The brunt of the 21 Squadron operations was still carried out by the Harvard 4s, but the aircraft would be rotated to Leopoldville for service and one or more T-6Gs would at times be sent out as replacements.

The ground troops continued to advance towards Stanleyville and some T-6s were supposed to deploy to Kindu, to support the mercenary column attacking from the south. However, the aircraft stationed at Ikela did not have enough fuel to go to Kindu. Additional fuel was being sent by a wood burning river boat, which had to stop to cut wood for fuel along the way, and progress was slow. An advance party was sent to Kindu and they had to wait several days in poor conditions before two T-6s finally arrived on 20 November, without any ammunition. Over the following days four T-6s operated out of Punia, a bit further north, for the final push towards Stanleyville, which was captured on 24 November 1964. By the evening of the same day, the T-6s had redeployed to Stanleyville and were operating

against suspected enemy mortar positions near the airfield.

One of the T-6Gs, FB-043, was lost at some point during the last months of 1964 but the details are unclear. One report states that a T-6 was crashed at Moanda on the Atlantic coast on 24 November, presumably on a training mission from Leopoldville, by Polish pilot Stefan Wójcik, who had joined the squadron some time earlier. If this is correct, the aircraft was most likely FB-043.

Stanleyville became the new forward base for 21 Squadron for a while and on 1 December 1964 it was reported that six T-6s were operating from there, i.e. all the remaining Harvard 4s and T-6Gs. The two ex Belgian T-6s were both flyable at this time but neither one was armed and both were used only as trainers at N'Dolo. The 21 Squadron detachment set up in the old airport fire station at Stanleyville, while the CIA aircraft used the big hangar. This was the only time during the entire Simba rebellion (except for a few days at Kindu and Punia in November) that the T-6s operated from the same airfield as the CIA T-28s and B-26s.

Ares Klootwyk, one of the South African pilots, recalls some of the missions in Stanleyville:

We were asked to a certain part of the river. If we saw any canoes, we were to shoot at them, since they were Simbas fleeing. Or go into this part of the township and fire, because the Simbas were there.

On the other side of the Congo River, across from the main part of the city, were some large cargo sheds. These were used by the rebels and two of the T-6s were sent to fire rockets into them. The pilots never actually saw any Simbas and, as so often was the case in the Congo, the result of the mission was inconclusive. Incidentally, while this mission was flown, most of the remaining members of the squadron were busy cutting open a large safe they had found in the Stanleyville Post Office and sneaking the loot away in a stolen Coca-Cola truck!

Two of the Harvard 4s left Stanleyville on 11 December and spent a week flying support missions out of Boende before returning to the home base at N'Dolo. The rest of 21 Squadron apparently also left Stanleyville for Leopoldville shortly afterwards.

By the end of December 1964, 21 Squadron only had nine pilots (including one of limited experience, used as supply officer) and three non-Congolese technicians in its ranks. Of these twelve, five were

South Africans, four Belgians, two French and one New Zealander. Only three T-6s were operational.

During the month, Mobutu had asked Lt-Col. Bouzin to build up the strength of squadron. By New Year, a new TOE of 106 men had been drawn up, 46 of them French speaking Europeans (preferably Belgians), of which 18 were to be pilots. Recruiters in Belgium had been told to look for pilots with previous military experience, a minimum of 1,500 flying hours and a maximum age of 45. The remaining 60 staff members were to be Congolese, 20 of them with some previous experience from technical service with the Belgians. The plan called for the beefed-up unit to have 12 to 16 T-6s. The additional aircraft would come from the Italy, where six more Harvard 4s were claimed to be ready for shipment.

Around the same time, the US Military Mission to the Congo was also enthusiastically lobbying for an expansion and recommended full US support for the T-6 unit. Their main arguments were:

- T-6s were readily available, and spare parts cheap and plentiful;
- The aircraft were easy to maintain;
- Transition of Congolese pilots into the T-6 "should eventually occur, whereas with T-28 aircraft it may be impossible";
- The T-6 could operate from almost any airfield in the Congo, unlike the T-28.

However, the Italians by this time declined to deliver any more aircraft at present, due to the political problems in Africa resulting from the Stanleyville operation.

On New Year's Eve 1964, the squadron was ordered to fly up and down the Congo River between Leopoldville and the capital Brazzaville of the neighbouring former French Congo. This was a warning to the government in Brazzaville, which was supporting the rebel movement in the former Belgian Congo.

21 Squadron began 1965 with its entire force home at N'Dolo airport, flying mainly training missions and some armed reconnaissance in the Leopoldville area. Several T-6s were combat ready but Lt-Col. Bouzin was reluctant to deploy them until further mechanics and spare parts were available. The Italians were reluctant to send 7 ½ tons of spare parts they were said to have ready for shipment to the Congo.

Jerry Puren had so far been the nominal CO of the unit but on 14 January he resigned (or was fired, depending on source). Before he left he nominated

Stefan Wójcik as squadron commander. Wójcik, who had previously flown with the RAF and with Avikat, was not a very popular commander and was prone to showing off. On his first flight in a FAC T-6, he took off from N'Dolo while most of the 21 Squadron pilots were watching. As soon as he got off the ground he did a roll, just over the runway. When one of the other pilots said he had been taught to keep the nose of the Harvard up a bit more than that, when rolling, Wójcik replied, "You fly the way you have been taught, I fly the way I know how to fly."

By this time the pay had started to be a bit erratic and the pilots went on a short strike. On 3 February, orders came through to deploy to Bumba with four T-6s, with another two in reserve in Leopoldville. The pilots refused to go until they had received their money and in the end they were taken to the bank and given some cash. On 5 February, four aircraft deployed to Bumba, where a new ground offensive was scheduled to begin the following day. The 21 Squadron detachment, with South African Ares Klootwyk as operations commander, were to support the advance, using the call-sign "Rita" when in touch with the ground forces. The other three pilots were Kevin Bell, Bob Brannon and Theo van den Walt, also South Africans.

However, the ground troops, with the French speaking mercenary unit 6 Commando as its core, kept putting off the advance and after a week or so Klootwyk and Brannon got fed up, and put in for leave to go home to South Africa. They were ordered to bring back to Leopoldville T-6G FB-743, which was the only aircraft of the squadron that had bomb racks, since it was needed for some tests. The T-6G was in poor shape and Brannon recalls that "nothing worked properly in the cockpit" during the ferry flight.

The same day the T-6G got back to N'Dolo, 15 January, the US State Department voiced "grave concerns" over reports that the Congolese had secretly imported ingredients for napalm and were about to go into production. This would lead to further African hostility towards Tshombe, and the US would get blamed. If any napalm was used, the US government would therefore withdraw its aircraft from the Congo.

The reports were true. Some Belgian technicians in the Congo had been experimenting with napalm production for some time, at Congolese insistence. A dozen or so simple canisters (cylindrical, with rounded ends) were produced by a local sheet metal workshop and fitted with grenade fuses. The special thickening agent normally used for napalm was not available so instead the AVGAS was mixed with crushed candles. A

dozen different mixtures were tried out before they settled on two alternatives: a thin mix that spread over a greater area, and a thicker one that provided more concentrated effect against a smaller target.

The initial tests had been done by a C-54 but on 19 February 1965, Wójcik flew T-6G FB-743 to the Kitona base near the coast for a napalm demonstration in front of numerous high-ranking Congolese officers. The tests were quite successful and Wójcik decided to do a victory roll. "He came back and right on the ground he did his little roll there, and made a nice big fire, right in front of them." Wójcik was killed instantly and the T-6 was completely destroyed.

There was talk of appointing Ares Klootwyk as new CO, but he went to South Africa for several months and instead a Belgian, Cdt. Pierre Noel, was appointed new commander. He was soon said to have instilled more discipline into the unit and from this point 21 Squadron also became more of a "Belgian" rather than a "South African" unit, even if the crews continued to be quite mixed in origin.

During February, the FAC was re-organized into two major formations 1er Groupement Aerien in Leopoldville, for training and supply, and 2ème Groupement Aerien at Kamina, which included 21 Squadron, FATAC and the CIA air units. Only the 1er Groupement headquarters was actually staffed, however, so once again there was little effect on the daily operations of 21 Squadron, with the unit continuing to be more or less autonomous.

The Congolese continued to have grand plans for the squadron and an official TOE from March 1965 showed 113 positions, with 16 T-6s divided into flights A through D, at least three of which were to be available for prolonged operations at separate locations at any time. These continued to be pipe dreams, however. Two Portuguese mechanics were hired but otherwise new recruitment was slow, although a few new pilots also joined in due course. On the other hand, March saw the first case of 21 Squadron pilots transferring to the CIA air unit, when Belgians Roger Bracco and Leon Libert crossed over. As for aircraft, 21 Squadron in the event never received any additional T-6s after 1964 and the four Harvard 4s together with T-6G FB-090 now constituted the whole operational force. The two old Belgian T-6s were periodically loaned to DICTMA during February to April 1965 but were used by 21 Squadron in parallel. AT-046 (formerly 9T-P46) then continued in use as an unarmed trainer with 21 Squadron, but FE-031 (the former 9T-P31) by all indications fell into disuse by mid 1965.

Bumba was to remain the main operational base for 21 Squadron for the rest of its days. There would normally be four T-6s on detachment there but this could sometimes be reduced as aircraft needed to return to N'Dolo for servicing. In Bumba, they were given orders each morning by the local commander, a Belgian Major, usually to fly armed reconnaissance or strike missions, as recalled by Ares Klootwyk:

Almost every time we were told to go and fire at some place, we would do it. We did not see people too often, but it is complete jungle there. They would say, "Go and fire on this particular house, somebody is using it as a headquarters. You can't miss it!" You had to tell them: "Draw me a map and I'll shoot the one you want me to."

The missions during this period were usually independent ones. Each mission would be flown by at least two aircraft, but sometimes three or four. When the town of Basoko (some 160 km from Bumba) was recaptured by the army, the T-6s played an important part, and later they were vital to its defence. Whenever possible they would patrol the Basoko area every day, and if they missed a day, the rebels would attack, causing the defenders to panic and consider running away. One of major effects of the T-6s, or any other air support, was psychological: it was enough for the aircraft to be seen or even just heard for the rebel activity to lessen or cease, and for defenders to grow in confidence. Direct support to ground troops was now less frequent but still performed when needed. On one occasion, the four T-6s provided continuous air cover for 12 hours to an army patrol that was being continually ambushed. The squadron also flew air cover for trains and ferries, as well as liaison and even the occasional casevac flight.

Even though the Simbas lacked anti-aircraft guns, now and then the T-6s would be hit by rifle fire. One pilot got a bullet through the windscreen, but luckily had his head down at the time, looking through the gun sight. When the US Air Attaché visited Bumba on 29 April 1965, two of the T-6s were temporarily put out of action due to hits from ground fire that very day. Two days earlier, Bob Brannon had flown a mission in FB-783 to a village in the area with New Zealander Jock "Mac" MacDonald as his wingman. Normally the pilots would not see anyone on the ground, but this time was an exception:

I went right down under palm trees and I see this bloke is standing right there with his gun. "To hell with you, I may come back for you!" And then I was hit! And I was losing an awful lot of blood. MacDonald and I each had, in the back, a Belgian officer flying along: they were something from HQ. And I said to this guy, "I may not make it back." It was a long way back, because I'm losing blood and I was feeling a bit woozy. And I said, "Find the control column," because I take the control column out when I put a passenger in the back. And he couldn't find the control column. I tried to tell him, if we get over the frontier, then he must bail out if something goes wrong. Because I don't know if I can get back, or do the landing. Because there is blood all over the place now. And he is saying, "Try to stop it," but I couldn't. I was trying to stop it with a handkerchief.

Brannon finally managed to get the wound temporarily bandaged and they made it back to base. The following day Brannon and MacDonald flew to Leopoldville in the same aircraft and Brannon was then off flying for a month, while recuperating.

The US Air Attaché's report from April stated that "the detachment is short of everything and it is remarkable they have been able to operate at all." The 7.62 mm machine gun barrels were "worn smooth" and the rocket tubes "badly worn." Only one aircraft had a functioning battery and two of them had constant hydraulic leaks. The maintenance staff consisted of one Portuguese armourer and ten Congolese mechanics, "with few tools and no support equipment." The pilots considered the Congolese mechanics little better than "floor sweepers," since they had not had any proper technical training. The non-Congolese mechanics were also not entirely trusted, since many of them "were rejects from somewhere or other." Few if any of the T-6s had working radios, mainly due to the lack of a radio mechanic in the squadron.

The last of the ex Portuguese T-6Gs was written off at Bumba some time in August-September 1965, when French pilot S/Lt. Pechard cracked up FB-090 on his first solo flight. He accidentally retracted the flaps during a slow approach to the field and crashed into the ground short of the runway. The T-6 had its wings torn off but the pilot survived to be booted out of the unit. The operational part of 21 Squadron now consisted entirely of Harvard 4s.

Recruitment continued to be something of a problem for 21 Squadron. As mentioned, a few Portuguese mechanics had been hired earlier in 1965. In September that year, General Mobutu considered hiring

some Portuguese pilots as well, presumably from those who had flown T-6s in Angola. Both the US and Belgium expressed concerns over this and the Congolese never progressed with the idea. The Belgian HQ staff also continuously tried to have some of the Congolese pilots being trained by DICTMA released for operations but these efforts were always thwarted by the Italian instructors.

The Harvards were sometimes called in for more unusual missions and on 18 January 1966, Ares Klootwyk together with South African Charles Vivier and Belgian Yvon Jacobs were doing a meat ration run to troops in the Bondo area, near the border of Central Africa. This was one of the last rebel strongholds. During the flight, they ran into bad weather and had to turn back, flying in poor visibility at low level. But while two of the aircraft had sufficient fuel for the detour, Vivier's aircraft, FB-783, did not. Ares Klootwyk recalls:

Charlie showed me by a pumping action of his arm that he was running out of fuel. I acknowledged and looked out ahead. We were flying over tropical jungle at the moment so there was no chance of him surviving a forced landing. Although we always used parachutes, we were flying too low now. Suddenly I saw a clearing, quite a large clearing ahead. I showed him, and as I showed him his aircraft dropped. He made a good wheels-up landing and climbed out and waved to us that he was alright.

We always used to carry some arms with us: a pistol or sub-machine gun. I had a Belgian Vigneron sub-machine gun which I threw out to Charlie. He subsequently told me the drop bent the barrel but I thought it worth a try if it survived.

Jacobs and I, by hitting a river somewhere and following it downriver to the Congo, managed to find our way home. We took off again to give Charlie cover. We also let WIGMO [the CIA unit] know and asked them to get us a helicopter, to come and rescue him. They said no, they couldn't release one. But between us, the T-28s and the B-26s, he was given daylight cover all the time. He was really in enemy territory and someone had to cover him at all times. [...]

The first night Charlie was on the ground, he went and sat in the front seat, closed up everything, and put the seat down to get to sleep. Then, in the middle of the night, he heard scratching on the fuselage. Lions! We were all carrying meat in the rear locker and the lions had smelled it and come for it. Charlie went into a panic, shot off a couple of shots to get the lions away,

jumped out and climbed up a tree where he stayed for that night, anyway. The next day he got the meat out, took it far away, and then managed to sleep in the aircraft again.

Mercenary commander Bob Denard sent in a rescue mission by road but they were unable to reach the crash site. In the end, two or three mercenaries volunteered to parachute into the clearing from a C-47 and they finally managed to bring Vivier out five days after his crash. He went back to flying straight away.

Although Bumba remained the main base throughout 1965 and also 1966, the limited range of the T-6 meant that they sometimes had to be forward based at other fields for a day or so, to carry out strikes in those areas. Airfields used in this way included Basoko, Buta, Boende, Lienart and Aketi; all of them in north, central Congo. The CIA air units kept further east and south.

On 12 February 1966, the FAC went through yet another re-organization. A new 21^{ème} Wing was created on paper (but not staffed), under the still equally fictitious 2^{ème} Groupement at Kamina. The T-6 unit became subordinate to the new wing, and was at the same time renamed 210^{ème} Escadrille A.T., or 210 Squadron F.B. in English. Cdt. Noel remained CO.

When Ares Klootwyk left 210 Squadron in late February 1966, he had flown a total of 358 T-6 missions. Spread over the days he had actually spent in the Congo, deducting leave periods, this equalled 1.4 missions per day: a high rate by any standard. The maximum had been five flights in one day. Exactly half the missions had been over enemy territory, and of those just over half again (27 per cent of the total) had resulted in strikes against ground targets. But by this time the war against the Simba rebels was winding down and the Bumba sector became increasingly quiet.

Following Vivier's crash, 210 Squadron's operational establishment was down to the three remaining Harvard 4s while the two unarmed aircraft were both also still officially on strength. By May 1966, however, only one Harvard 4 and the Harvard 2B were in operating condition, the rest being out of service due to a lack of engine spare parts. The staff consisted of some thirteen pilots and ten mechanics. The squadron HQ was being moved from N'Dolo to N'Djili airport but N'Dolo was still used as a maintenance and training base. There had been negotiations to buy no less than 40 additional T-6Gs through a French company, at US\$ 4,000 each, and to hire additional mercenary crews. The motive was to make the Congolese forces independent

of CIA's air support but the negotiations were suspended due to a lack of funds.

A US survey of the Congolese air operations in May 1966 concluded that 210 Squadron was "almost completely ineffective" due to "lack of motivation, shortage of spare parts, and a lack of discipline and proper supervision." The unit was completely reliant on the Italian DICTMA mission for spare parts. The pilots "generally fly only ineffective reconnaissance type flights" and, with only one operational aircraft they were at present refusing to fly any combat missions, due to the lack of a wingman to report the location in case of a crash. Although of "no practical value in its present condition", it was suggested that the squadron could be used to absorb Congolese pilots after training or as the nucleus of a new, better-supported unit.

The lack of operational T-6s meant that the pilots now got most of their flying time in transport aircraft. In addition to its T-6s, the squadron had from the very beginning also operated one, two or even three transport aircraft – including a C-47, a Dove, a C-54 and a Beech 18 – and this side of the operation was now becoming increasingly dominant.

There were discussions on the US side during this period to finance 210 Squadron with up to \$1 million for new equipment and crews, or even to integrate the T-6 unit into the CIA organization. One US proposal was to have two fighter-bomber squadrons in the FAC: one each with T-6s and T-28s. The T-6 unit would have three detachments of four aircraft each, based at Kamina, Kikwit and Kindu. However, the US State Department was reluctant to approve this, since any problems with the unit would reflect badly on the USA.

In the early autumn of 1966, various events caused relations between the Congo and the USA to cool down and the Americans began looking for ways to wind down the CIA air operation. The Department of Defense suggested in October that the CIA T-28s should be transferred to the moribund 210 Squadron and this was agreed in Washington the following month.

By February 1967, the conversion from the T-6 was under way in Kinshasa (the new name for Leopoldville) and at least eight of 210 Squadron's pilots received training on the T-28 by CIA pilots, including some who had themselves previously flown in their unit. Around the same time, Belgian Henri Laurent took over as CO from Noel. The conversion continued until April, when the T-28s were officially handed over to the Congolese for use by 210 Squadron.

In 1967, 210 Squadron was still shown in US reports as having four T-6s, including three armed.

These would have been FB-782, FB-809, FB-836 and AT-046, although the latter most likely stopped being used in late 1966 when T-6 training ceased. The T-6C, FE-031, was still included in tallies until late 1966 but may in fact last have been flown in 1965. All were at N'Dolo.

Once the T-28 conversion was completed, the T-6s were flown very little, and after General Mobutu deported all *mercenary* pilots (including those of 210 Squadron) in July 1967, it is unlikely they saw any use at all. The remaining three armed Harvard 4s were questionably considered a type of "home guard" for Kinshasa by some government officials but in practice their value was deteriorating fast. By mid 1968, the three aircraft were reported as not having been operational for a year and requiring "heavy maintenance" to fly again. This never happened and 1968 can be taken as the retirement year of the armed T-6s of the FAC, even if a few of them no doubt remained on nominal FAC charge for some additional time.

In summary, the operational history of the T-6 with 21/210 Squadron is rather more complex than might at first be expected. The squadron was always limited in size and seldom had more than four T-6s in the field at any one time. On the other hand, these were the only ground support aircraft operating in north central Congo and certainly did contribute to the defeat of the rebels in their area. There were no losses to enemy action but no less than two-thirds of the armed aircraft were instead lost to accidents, together with three pilots. The unit did not have any spectacular engagements but its achievements were rather low-key, over a long period. For much of the time, the mere presence of the T-6s had a decisive effect on the campaign. However, it would no doubt have been more cost-effective to add four T-28s to the CIA force rather than maintaining a separate T-6 unit. From the start, 21/210 Squadron owed its existence to political circumstance rather than to military necessity.

Even after the demise of 210 Squadron, however, there was still one T-6 user within the FAC. This was DICTMA, the flying school of the Italian military mission. DICTMA will be covered in part 3 of this article, which will also include the aircraft table originally promised for part 2.

Painting and Markings

The former Portuguese T-6Gs were overall natural metal with black anti-glare panels. The two ex Belgian T-6s appear to have been sprayed silver but may have been partly unpainted as well.

The former Italian Harvard 4s were not in the usual Trainer Yellow paint scheme one might expect but were instead painted in a rather peculiar yellow colour with a distinct greenish tinge. This was an Italian colour called "Giallo Limone ad Alta Brillantezza n. 22" (High Gloss Lemon Yellow no. 22), which was unique to the Harvard 4s in Italian service. The FS 595 reference is approximately 13481. On delivery, the Harvard 4s still carried Italian roundels in six positions and these were overpainted in the Congo in a slightly more brownish hue than the rest of the aircraft. Anti-glare panels were black. The rocket rails and the lower, detachable part of the gun pods were natural metal while the top part of the pods, permanently fixed to the wing, was painted a slightly less greenish yellow than the Lemon Yellow used on the rest of the Harvard 4s.

Within a few months, all surviving T-6Gs and Harvard 4s had the top parts of their canopies tinted blue, to deflect the sun. The extent of the blue area varied somewhat between different aircraft.

The two older aircraft already had red wing tips from their previous FAC service and the same was soon applied to T-6Gs FB-090 and FB-743, and presumably FB-043 as well. When FB-090 was given a spinner late in its life, this was likely also painted red.

The Harvard 4s originally had their spinners and wing tips the same colour as the rest of the aircraft. FB-782 and FB-836 later had spinners and wing tips painted white. FB-783 had a blue spinner and white wing tips. FB-809 apparently never had its wing tips painted and usually operated without a spinner.

All aircraft of 21/210 Squadron carried 1964 style Congolese national insignia, with short red and yellow bars, on the fuselage, on top of the right wing and under the left wing (opposite to US practice, please note). The insignia on the wings were slightly bigger than those on the fuselage. Congolese flags appeared on the fins.

Aircraft serials appeared on the fuselage in black, in varying sizes and styles: refer to photos. The reason for the change from the FA to the FB prefix is unknown, as is the unique use of FE on FE-031. The AT prefix of AT-046 tied in with the Harvard 4s used by DICTMA.

All Harvard 4s carried an MM number in black below the tail plane, but only FB-783 had the Italian type designation "HA.4" added under that in the same size. As already noted, the ex Belgian and ex Portuguese T-6s also had fictitious MM numbers painted under their tail planes after some time.

Leif Hellström (SAFCH #786), Sweden.

Captions for Photos on Pages 71-72

1. Former Portuguese T-6G FA-079 after its ignominious end in Luluabourg on 15 August 1964, on the way to its first combat operation. Note the small extra air intake on the nose: a tell-tale sign of a T-6G having served with the French Air Force at some point. (Jimmy Hedges via Dave Becker)
2. A pristine-looking Harvard 4, FB-783, in the hangar at N'Dolo airport. The photo is most likely taken in the summer of 1964, during preparation for service just after arrival. The Italian MM number and designation below the tailplane are clearly visible. (Via Dave Becker)
3. Genuine action shot of T-6G FB-743 in Stanleyville, seen shooting up some cargo sheds suspected to be rebel hideouts on 27 November 1964. The red wing tips and the position of the wing roundel are both evident. (Via J-P Sonck)
4. Three T-6s of 21 Squadron on their way to a target in northern Congo. Pilots frequently kept the front canopy open for added ventilation. FB-836 had its wing tips and spinner painted white by this time. (Kevin Bell via Dave Becker)
5. FB-090 was the last of the "Angolan" T-6Gs to survive. It is seen here at Bumba, with Adjutant Léon Van den

Bon. The aircraft carries the normal gun and rocket armament of the FAC T-6s. Note the red "AVION ARMÉ!" (Aircraft Loaded) sign hanging from the gun barrels, and the tinted panels along the top of the canopy. (Via J-P Sonck)

6. South African T-6 pilot Ares Klootwyk, with fellow pilots Jean Peraux and Yvon Jacobs, in front of FB-836 at Lienart in 1965. This airfield was typical of the smaller Congolese fields used for operations by the FAC T-6s. The positions of the old Italian roundels were clearly visible on the Harvard 4s. (Via Ares Klootwyk)
7. For reasons unknown, FB-783 was completely repainted after some time in service, in a slightly darker colour than before: perhaps in the brownish yellow used to paint out the Italian roundels. At the same time, the fuselage serial was repainted in a larger size. This aircraft was alone in having a blue spinner. It is seen here over typical Congolese terrain. (Via Dave Becker)
8. AT-046 (previously 9T-P46) was used as an unarmed proficiency trainer for most of the existence of 21 Squadron. It was an old Belgian Harvard 2B: despite the MM number on the rear fuselage it was not a former Italian aircraft! (Carlo Zorzoli)

Piper Aztec and Comanches of the Aereo del Ejercito Ecuatoriano

CAP: Jorge Delgado P.

In 1958 the Piper Aircraft Corporation saw the necessity to get away from the tube and fabric Cub type of planes and design a four passenger light single-engine, low-wing, all-metal aircraft with retractable undercarriage. It was the desire of Piper Corporation to compete with the rival company's airplane, the Beech "Bonanza" 35, queen of the high performance light airplanes. Piper decided to call the new plane Comanche to maintain the Piper tradition of naming their aircraft after famous Native American Indian tribes or common Indian objects.

In 1972 when Hurricane Agnes destroyed the Piper manufacturing plant in the city of Lock Haven, Pennsylvania, the directors decided to end the production of the PA-24 Comanche because it would be too expensive to reconstruct the facilities. Instead, Piper continued with the manufacture of two newer designs, including the "Arrow", at their facilities in Vero Beach, Florida.

In 1960 the aviation unit of the Ecuadorian Army, the Servicio Aereo del Ejercito (SAE), presented a technical and financial report based on findings of a meticulous study done by Major Colon Grijalva Herdoiza. In this report, Major Grijalva recommended that army aviation acquire the Cessna 01 Bird Dog. Despite his recommendation, the planes that were ordered were not the ones that Major Grijalva had requested; they were Piper aircraft. The delivery included one Piper Aztec twin-engine s/n 201 and five single-engine PA-24 Comanche, s/n 101, 102, 103, 104, and 105. The characteristics of these aircraft, unlike those of the 01 Bird Dogs, were not suited to the type of operations that were required of the Ecuadorian army in their Amazon Rainforest outposts.

After six months, the inevitable happened. On September 24, 1961, Mayor Colon Grijalva died, together with four other officers, when the Piper Aztec 201 that he was flying crashed into a mountain peak close to the town of Santa Ana in the province of Manabi. If his earlier recommendation had been followed by the commission, he probably would be alive today.

Five months after this accident, on April 6, 1962, Lieutenants Abel Morales Beltran and Pedro Oscar Bajaña took off at 1043 hours in Comanche 101 on a routine logistics flight. Their route was from Quito to Pastaza, but before they reached their destination they declared an emergency. Several hours passed and the aircraft failed to arrive at its destination. After six days of searching by air and on the ground, the remains of the plane and its crew were finally located in a gorge of the Yanganates mountain

range, near the confluence of the Blanco and Verde rivers. The crash site was located just one kilometer from where a Grumman aircraft belonging to the Shell Company crashed in 1947 while delivering aid to victims of an earthquake at Ambato. The wreck could not be reached due to inaccessibility of the terrain. It took fourteen days for the rescue parties to reach the site to recover the remains of the plane and its crew.

This event revived a controversial issue within the Armed Forces. Some of the High Brass believed that guns were only for the Army, ships only for the Navy and the airplanes only for the Air Force. Therefore, the High Command of the Army ordered that all flying operations come to a stop and all Army airplanes be turned over to the Air Force. This included the remaining four Comanches.

The Servicio Aereo Del Ejercito at that time had only six planes: two Piper Cubs (s/n 10 & 15) and the four Comanches (s/n 202, 203, 204, & 205). The four Comanches were handed over to the FAE and the two Cubs were stored at the Guayas Army Base "warehouse" out of sight of the Air Force.

The Air Force maintained the original numbers on the rudders of the Comanches, but the word EJERCITO was deleted. All personnel, including mechanics and pilots, were requested to report to the Air Force Command to begin a retraining on helicopters as a prerequisite for the renewal of operations by the army.

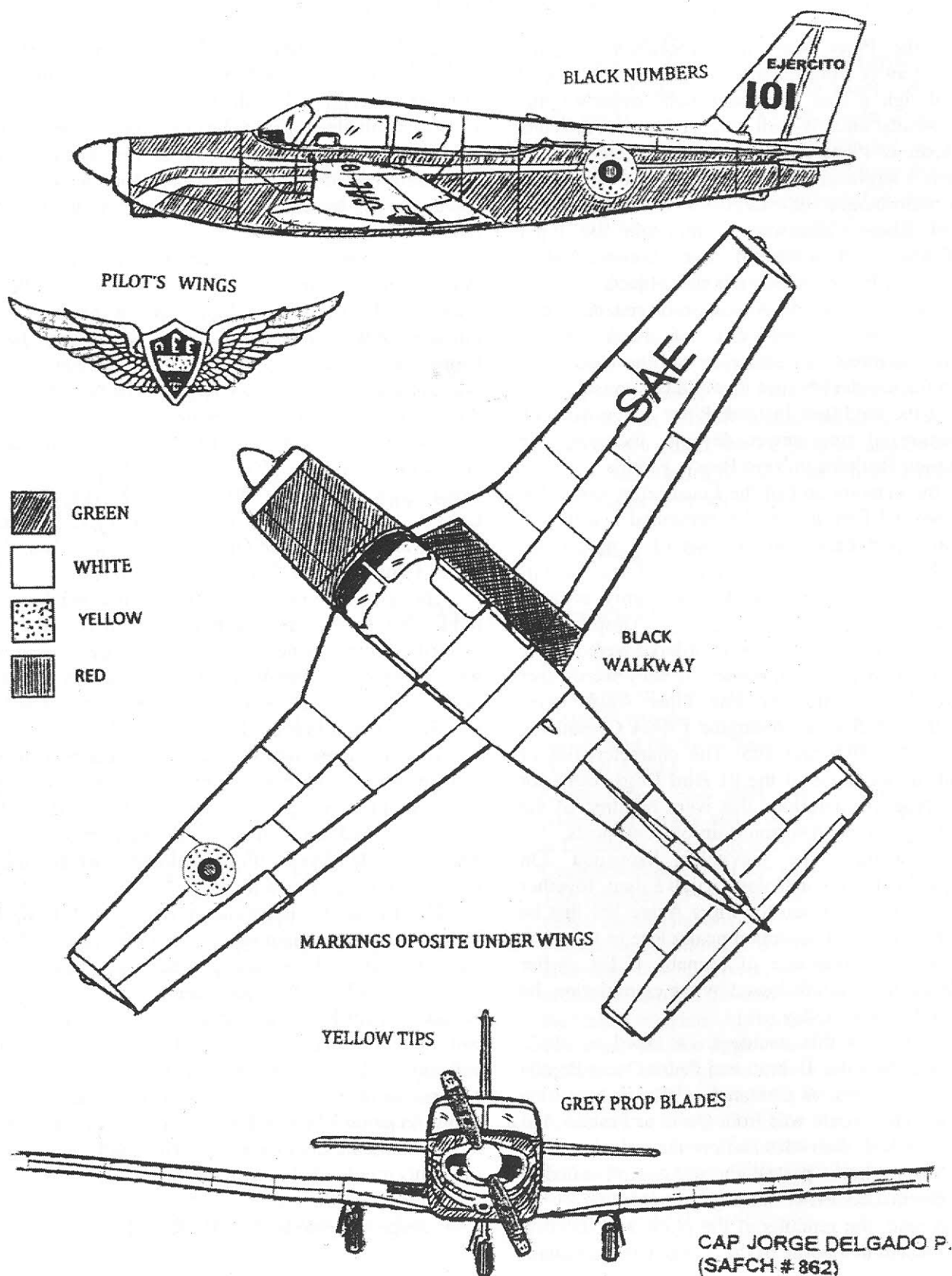
This retraining never took place because there was a "low passion" within the army to switch to helicopters. The army pilots were never assimilated into the Air Force. They remained army officers in their respective units. After a couple of years, things calmed down and the army was able to renew operations.

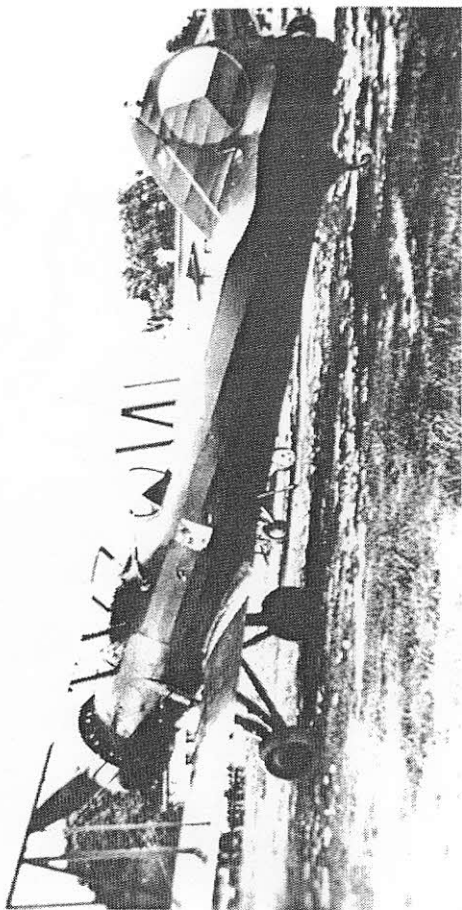
Thanks to the intervention of Colonel E.M. Pedro Vélez Moran, commander of the II Motorized Division "Guayas", Army Aviation managed to get back two of the four Comanches that had been turned over to the Ecuadorian Air Force. Unfortunately, these aircraft were in bad condition, and as a result, the army managed to get only one airborne. After a couple of years of service, it was put on a pedestal and now stands guard outside the Army Aviation Flight School in the city of Guayaquil. Its rudder bears the number E-160. This number is a mystery since this number belonged to an army T-41.

CAP: Jorge Delgado P. (SAFH #862), Ecuador.

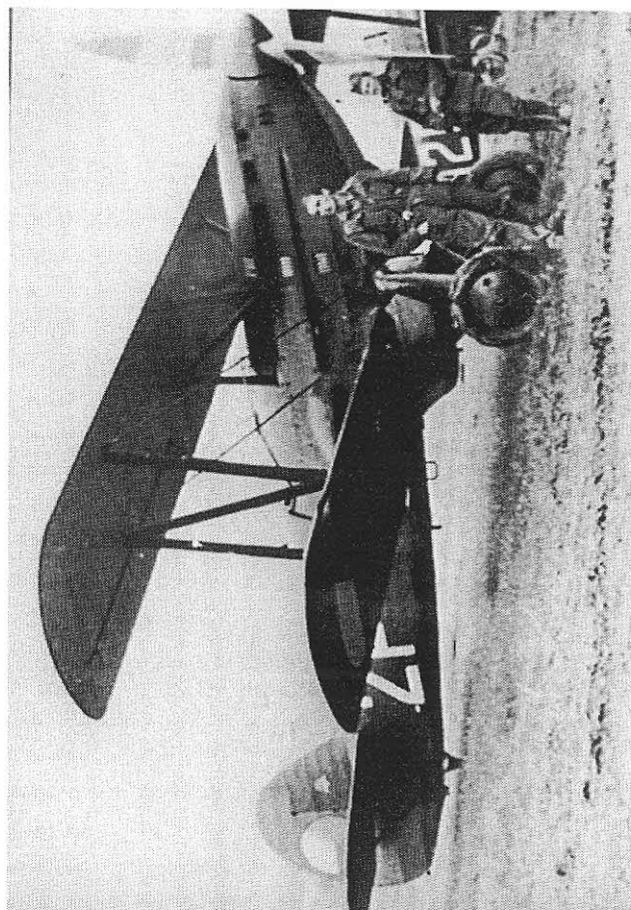
AVIACION DEL EJERCITO ECUATORIANO

PIPER PA-24 COMANCHE

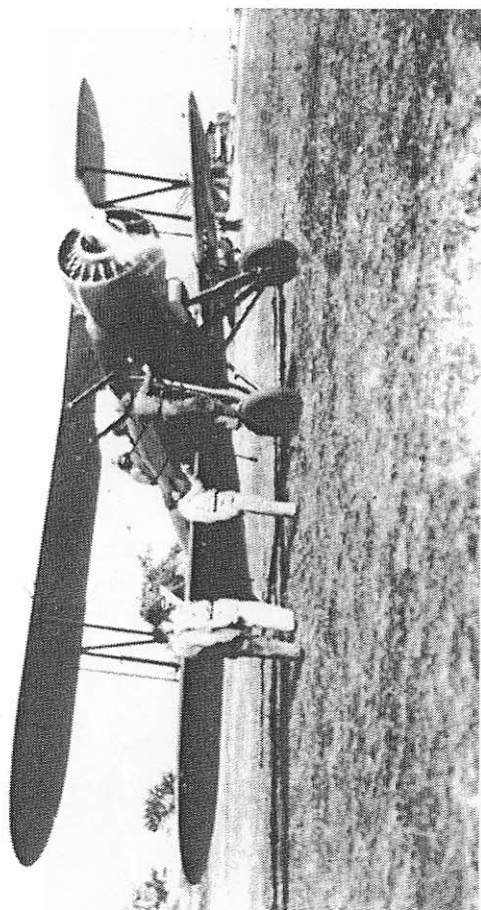




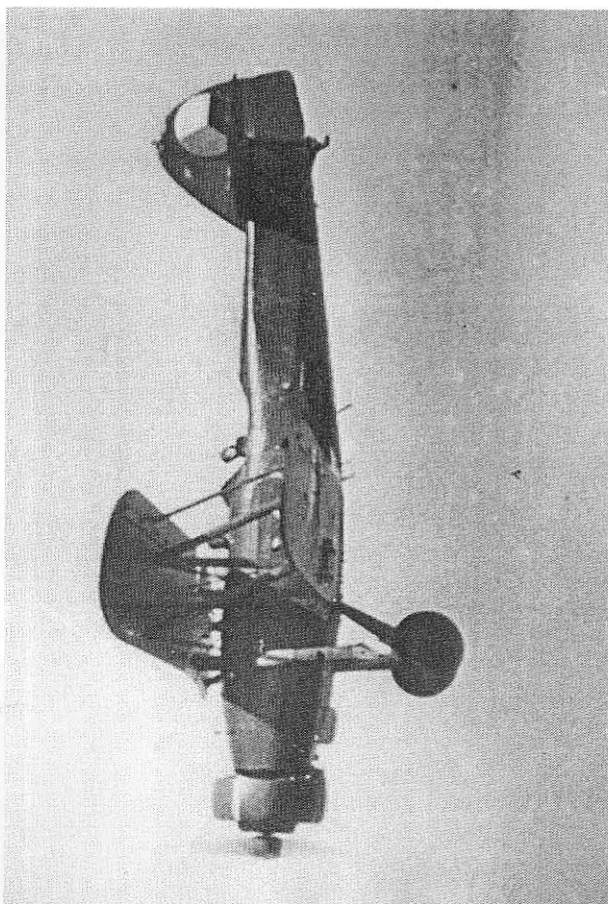
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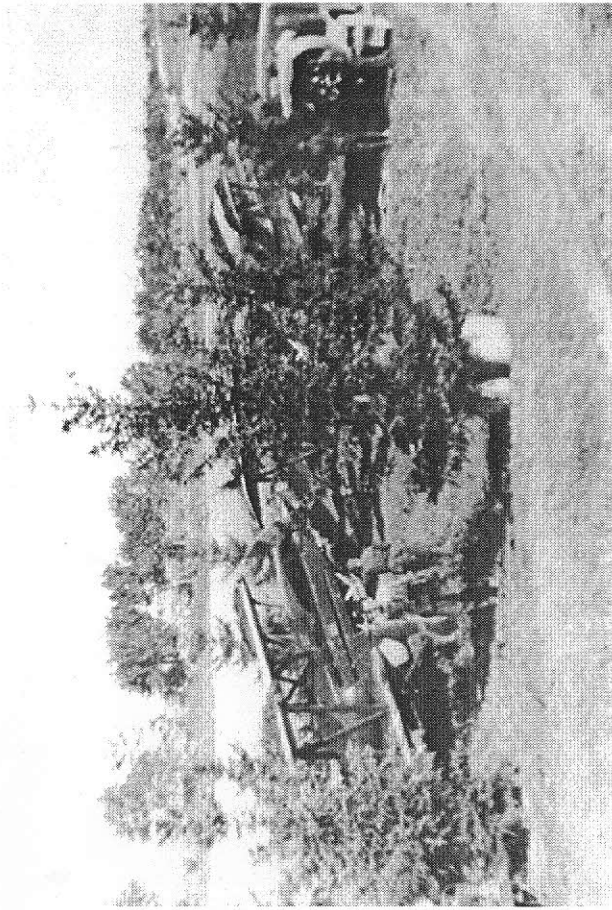
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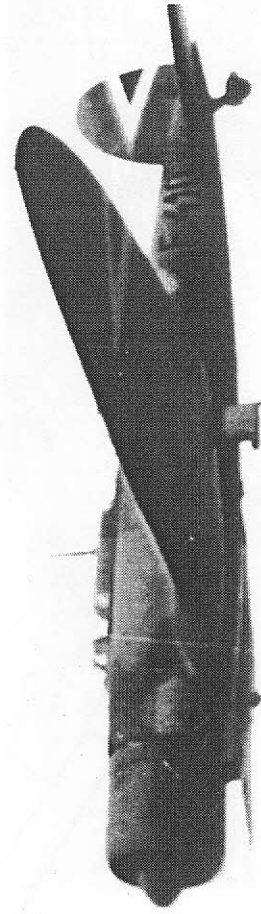
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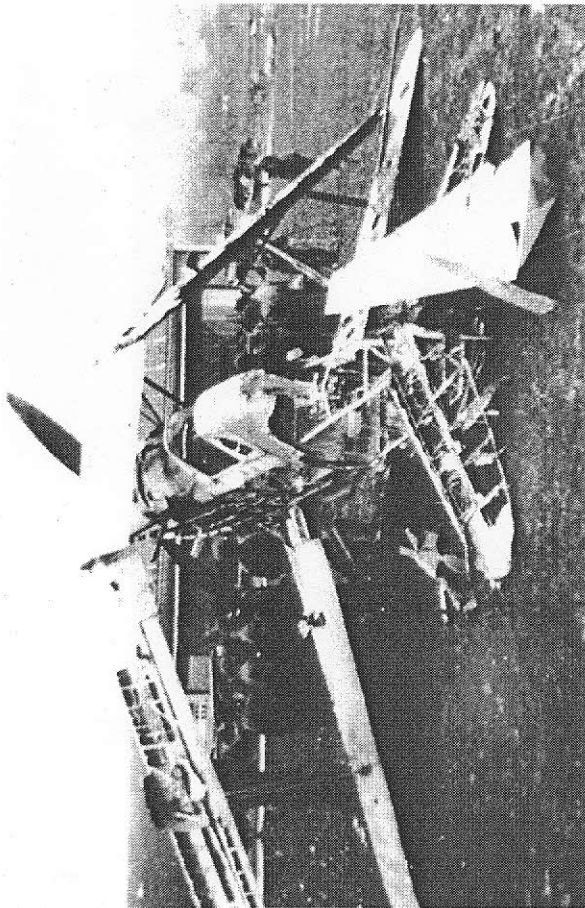
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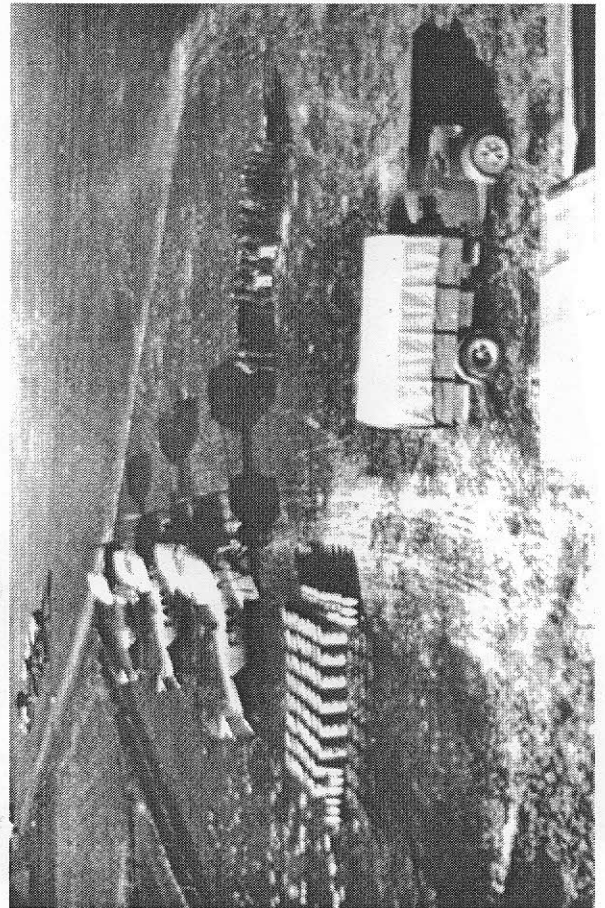
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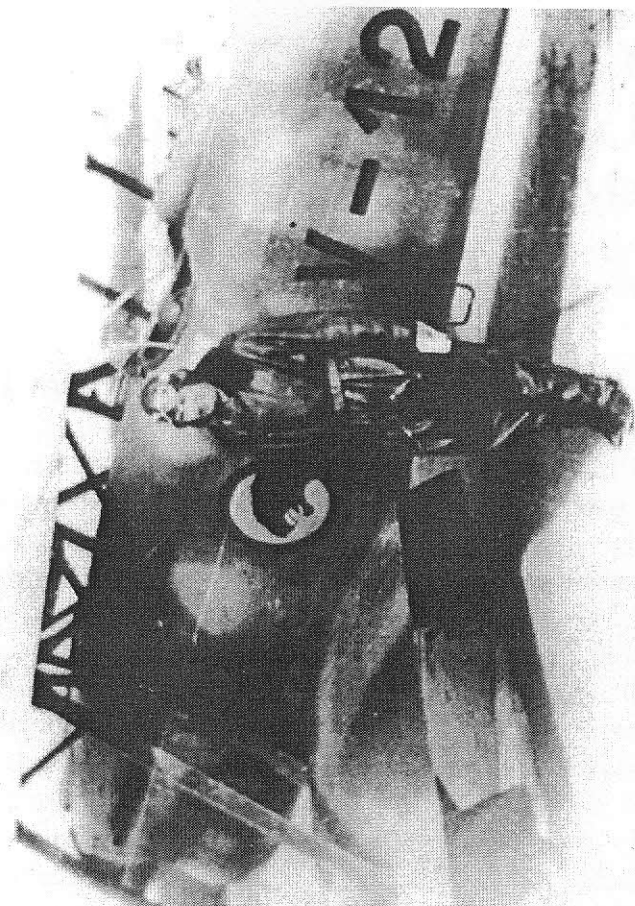
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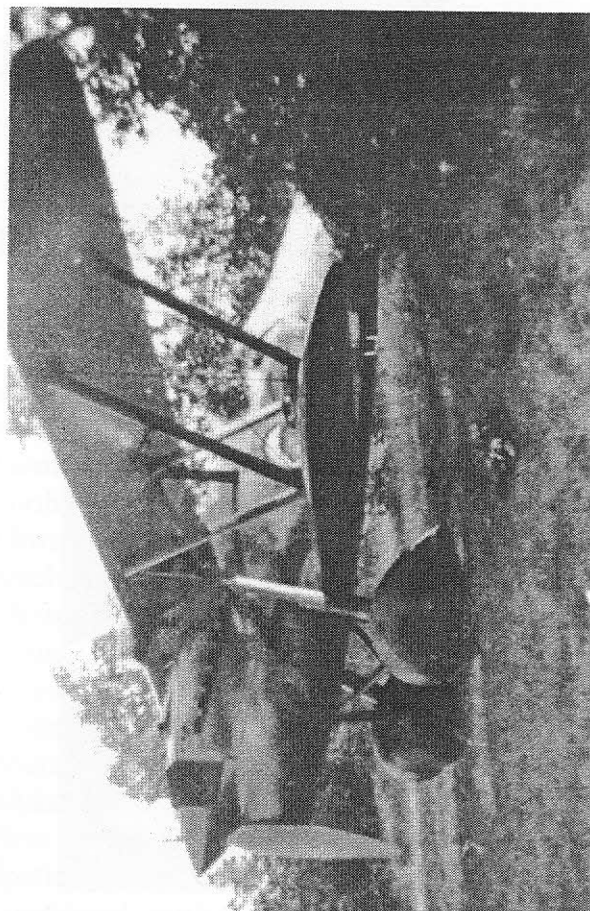
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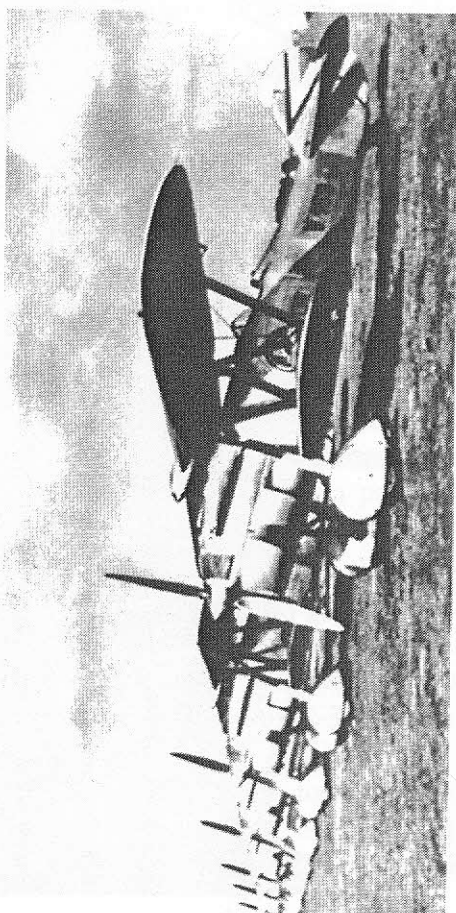
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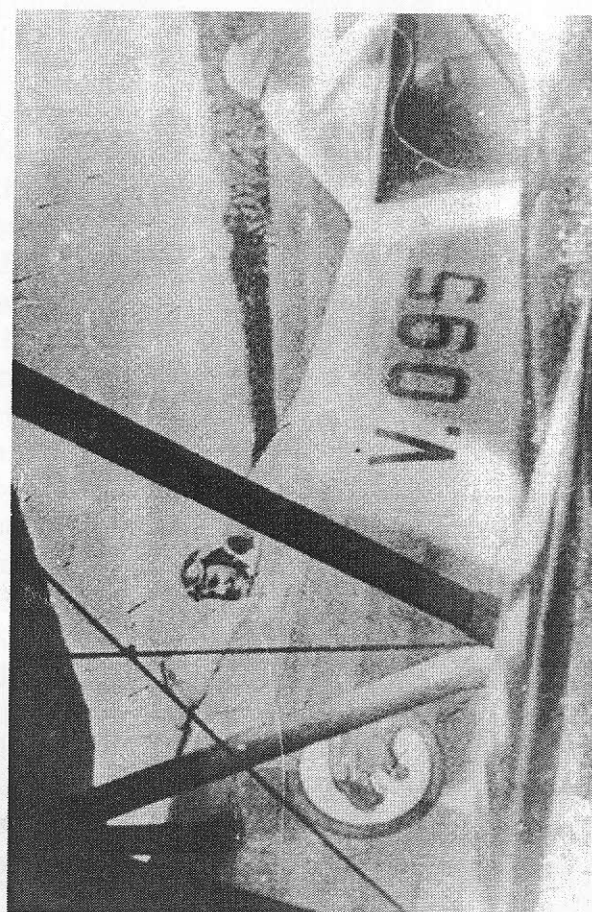
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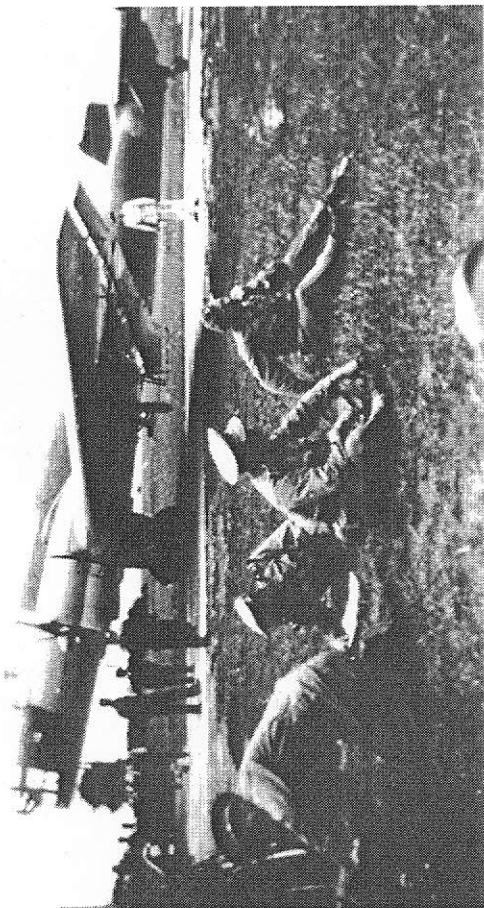
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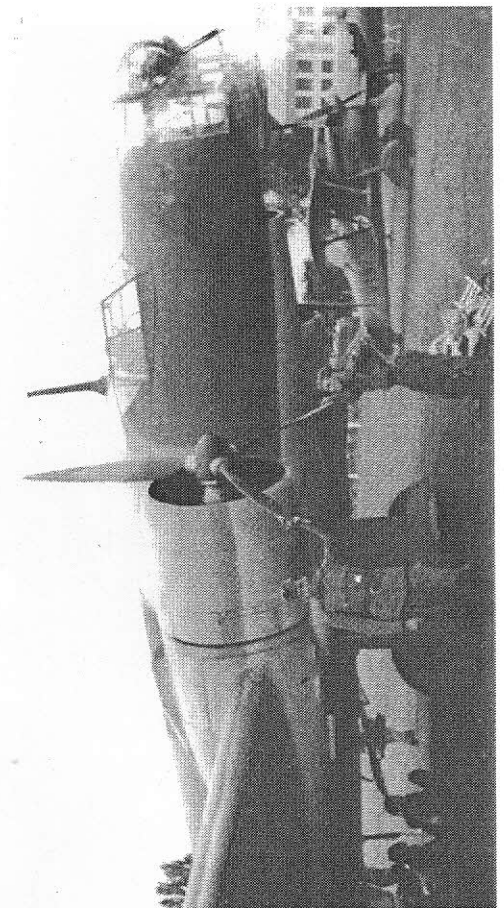
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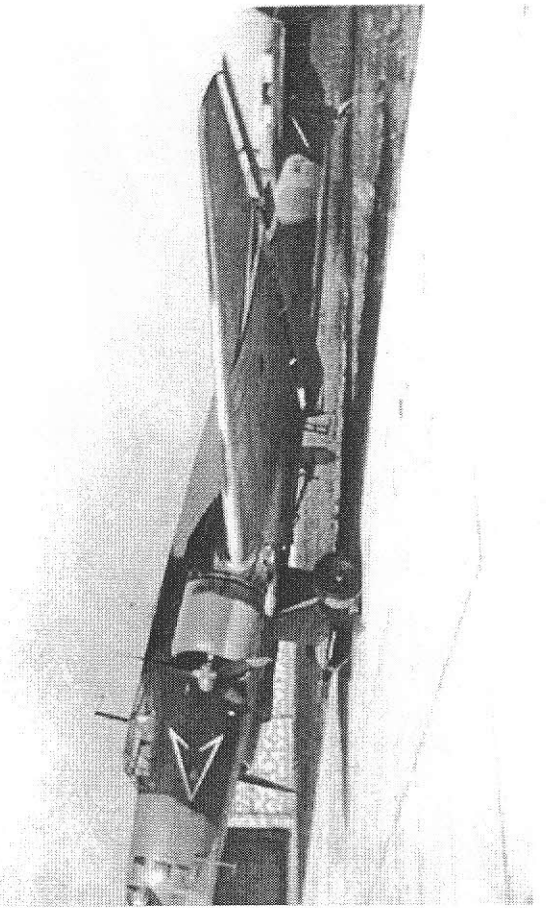
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16

Air War over Ruthenia

Combat between the air forces of Hungary and Slovakia

March 1939

(Part II)

Bohumir Kudlicka & Rudolf Höfling

The first day

On the morning of March 23, 1939, without any declaration of war, Hungarian troops crossed the Slovak border from Ruthenia and advanced into the country's interior. The army command rightly assumed that, after the departure of Czech army personnel, Slovakia would not be able to field a fully-functional army in such a short time. The Hungarians advanced in three main directions. In the north they advanced from Velky and Maly Berezny towards Stakcin. In the centre they advanced from Užhorod towards Tibava and Sobrance. In the south they advanced from Užhorod towards Pavlovce. The southern force consisted of the 7th, 9th and 24th Autonomous Infantry Brigades, the 2nd Motor Brigade, the 1/2, 2/2 Cavalry Brigades and the 2/10 Cavalry Company.

The commander of the Slovak VI. Corps, *podplukovník generálního Stábu* Augustin Mlár, deployed three groups against the intruders. The northern one, called Stakcin, was sent towards Malé Berezné and Stakcin and was partly made up of the 16th Infantry Battalion and one artillery battery. The southern one, called Michalovská or Zemplinská, operated towards Michalovce, and was made up of the 20th Infantry Regiment, the 112th Artillery Battery and part of the 12th Cannon Battery of Assault Traction. A third Slovak group, called Presovska, was held in reserve and was made up from parts of the 11th Infantry and the 17th Mountain Division.

This numerically small defence would be supported by air units located at Spisská Nová Ves. To evaluate the possibility of a Hungarian attack along the southern border between Rimavská Sobota and Kostolany nad Hronom, a Letov Š-328 belonging to 12. *letka* and piloted by *porucik* F. Wágner with gunner/spotter *porucik* A. Slodicka, took-off at 0700 hours on March 22. However, they did not find any concentration of Hungarian troops. The same result

was found by the pilots of three B-534 of 49. *letka* when they flew south of Kosice the following morning. In the meantime, the Hungarians in the north and central columns were meeting only slight Slovak resistance, and before 1000 hours they reached nearly to Sobrance. To avoid being besieged Slovak units had to retreat, and this fall back created chaos that made defence difficult to co-ordinate. The corps' commander ordered an immediate aerial reconnaissance to evaluate the situation. At 0900 hours, three B-534 of 45. *letka* (3. *peruti Leteckého pluku č.3*), lead by *rotmistr* J. Hergott, took-off and flew to the Ulic/Kolbasov/Starina area, where they spotted numerous enemy troops. The situation was considered serious, and at 1115 hours the Stakcin group was ordered to stop the Hungarian advance. At 1300 hours, three Letov Š-328 of 12. *letka* (crews: *porucik* F. Wágner with *porucik* J. Simko, *cetar* P. Salantay with *porucik* F. Svento, and *desátník* V. Kotrán with *porucik* A. Slodicka) took-off to bomb the enemy in the area of Ulic/Ubla/Velké Berezné, and, as an alternative, to scout enemy movements in the area of Sobrance/Pavlovce/Michalovce. Bad weather, heavy fog and snow showers did not allow the airmen to distinguish between their own and enemy units, but they did spot the advancing Hungarian 9th Autonomous Infantry Brigade. The aircraft of 12. *letka*, with all bombs unused, landed back at their home airfield at 1530 hours. A quarter of an hour later, a flight of Avia B-534 belonging to 49. *letka* (pilots: *porucik* J. Prehacek, *desátník* S. Devan, and *cetar* C. Martis) took-off for a mission over the Kolbasov and Ulic area. At the Ulic railway station, they found and attacked units of the 9th Autonomous Infantry Brigade and a half Cavalry Brigade. Another three B-534 of 45. *letka* (pilots: *porucik* J. Svetlik, *rotmistr* J. Hergott, and *desátník* M. Danihel) were sent to the same area at 1500 hours to attack the advancing enemy. The first flight attacked cannons

and cars hidden at a farm house near Ulic. Svetlik's B-534 was hit by ground fire. The aircraft caught fire and crashed north of the village, the pilot dead in the cockpit. *Porucik* J. Svetlik was buried in Castaja. The other two B-534 strafed the farm until their ammunition was gone. Although damaged by anti-aircraft fire, they managed to return to their home airfield at about 1700 hours.

Just before these Avia's landed, three other B-534 of 49. *letka* (pilots: *porucik* J. Prehacek, *cetar* C. Martis, and *desátnik* S. Devan) took-off for their second mission of the day to the Ulic/Ubla/Stakcin area. Devan's aircraft was hit by ground fire near Ulic. The seriously injured pilot landed near the Stakcin railway station, but died shortly afterwards. His Avia B-534 was destroyed by Slovak infantry to avoid its use by the enemy. The two remaining B-534 continued strafing an infantry column along the Ulic/Kolbasov road, as well as machine-gun posts in Ulic. They also returned to their home airfield quite damaged. A Letov Š-328 piloted by *svobodnik* J. Ondris with *porucnik* J. Slodicka in the observer's seat, took-off around 1700 hours for the last action of the day. Their task was to bomb Hungarian tanks near the village of Gajdos, in support of units of the Michalovská group that were counter-attacking. The crew spotted a few Hungarian Ansaldo 35 tanks and some lorries in the yard of a farm at Nizna Rybnica and attacked them. Enemy fire injured the pilot and the crew made an emergency landing near a farm not far from Secovce.

Results of the first day were not encouraging. Despite no encounters between the SVZ and the MKHL, the Slovak squadrons lost two pilots (one of them injured) and two Avia B-534. In addition four other B-534 and one Letov Š-328 were heavily damaged.

The second day

March 24, the second day of the conflict, brought no change for the units of the SVZ. However, on the ground, after reinforcements arrived during the night, the Slovak Stakcin and Michalovce groups went on the offensive at 0430 hours, and started to push out the aggressors. Aerial support was supposed to be given by 12. *letka* with four Letov Š-328. For unknown reasons, only one aircraft (crew: *porucnik* F. Wagner and observer *cetar-aspirant* J. Gursky) took-off at 0545 hours. Due to heavy fog over the

countryside, the crew could not fulfil their task and instead bombed a small lorry column on the streets of Tibava/Sobrance.

At 0630 hours, three Avia B-534 of 49. *letka* (pilots: *porucik* J. Prháček, *cetar* C. Martis and *svobodnik* M. Karas) took-off to support the ground units operating around Vysná Remeta, north of Stakcin. A *Raj* (flight of three aircraft) of Fiat C.R.32bis of 1/1 *Vadászszázad*, providing air cover to parts of the Hungarian 2nd Motorized Brigade, spotted the three B-534 and attacked. Flying Officer A. Negró's fire hit Prháček's aircraft and the severely wounded pilot made an emergency landing in the valley of the Luhavec River. Unfortunately, the bombs attached under the wings of this B-534 exploded during the crash killing Prháček instantly. Meanwhile Martis' Avia was also hit by a second attacking C.R.32bis (pilot S. Szóják of unknown rank) and he had to make an emergency landing near the village of Lúcky. The last B-534, with Karas, although badly damaged, managed to return to the home airfield.

Shortly after 0700 hours a reinforcement of six Avia B-534, of 37., 38., and 39. *stihaci letka*, took-off from the base at Piestany for Spisska Nová Ves. Five aircraft arrived (pilots: *porucik* O. Dumbala, *cetar* F. Cypric, *desátnik* V. Grun, J. Sári, and R. Mrákava), and after refuelling, took-off to scout over the Sobrance/Michalovce area. The sixth B-534 from the reinforcement squadron, flown by *desátnik* J. Jurek, was late arriving from Piestany, and during landing became stuck in the wet ground of the airfield, and had to be abandoned there. A further three Avia B-534 belonging to 45. *letka* (pilots: *porucnik* J. Pálenicek, *rotmistr* J. Hergott, and *svobodnik* J. Zachar) took-off for action at 1000 hours. These aircraft were ordered to attack Hungarian tanks supporting the 9th Autonomous Infantry Brigade operating in the Tibava/Sobrance/Nizna Rybnica sector. Over the target area, the three Slovak fighters received heavy anti-aircraft fire that badly damaged two of the B-534. Zachar had to land in Hungarian territory where he was captured [Note 1].

At 1345 hours, three Letov Š-328 belonging to 12. *letka* took-off for a reconnaissance and attack mission against Hungarian troops moving on the Užhorod/Michalovec road. The Slovak crews were: pilot *svobodnik* J. Maco with observer *nadporucik* M. Guljanic, pilot *svobodnik* G. Pazicky with observer

porucik F. Svento, and pilot *svobodnik* J. Drlicka with observer *podporucik* L. Sronk.

An escort for the three Letov Š-328 was provided by three Avia B-534 of 45. *letka* (pilots: *rotmistr* J. Hergott, *cetar* F. Hanovec, and *desatnik* M. Danihel). They left the airfield a quarter of an hour after the Letovs and the two flights met over Michalovce. Shortly afterwards, heavy ground fire damaged Pazicky's Š-328. At the same time, the group was attacked by nine Fiat C.R.32bis of 1/1 *Vadászszázad* based at the Užhorod (Ungvár) airfield. A Fiat C.R.32bis, piloted by Flying Officer L. Palko, shot down the damaged the Letov Š-328 of Pazicky which fell into woods near Nizna Remeta. Pazicky perished in the wreckage and is buried at Pavlovce nad Uhom. The observer, Svento, parachuted but reached the ground dead. There are two versions regarding his death. According to the Slovak sources, he was shot by Hungarians while still in the air. The Hungarians maintain that a member of 2nd Cavalry Brigade was looking for Svento's identification papers in his flying suit after his landing. During the search, Svento's movement was interpreted as an attempt to take out his gun and therefore he was shot. The truth will never be known. The Hungarians buried the airmen with full military honours in Sobrance the following day.

The other two Letov Š-328 bombed targets on the road to Sobrance. Drlicka's Š-328 had to make a forced landing near the village of Strazske. The third Letov with, Maco and Guljanic, returned to its home airfield at 1625 hours. The Avia B-534 suffered a worse fate. Hergott's plane was hit by Flying Officer A. Bekassy's machinegun fire and started to burn, but the Slovak pilot managed to land near the village of Banovce nad Ondavou. Hanovec's B-534 was also hit and damaged not far from Senne. The third Avia with Danihel at the controls suffered punctured fuel tanks and landed in a field near Brecovice nad Torysou; he only returned to his home base on March 27, 1939.

The second day of SVC action was again disastrous: three airmen killed in action, three aircraft lost (one Letov Š-328 and two Avia B-534), and a further nine aircraft (two Š-328 and seven B-534) badly damaged. In return, the MKHL had lost one Fiat C.R.32bis that was shot down by its own anti-aircraft defences; the pilot, A. Kertesz, parachuted safely.

The cause of the heavy Avia B-534 losses was primarily because of their use against ground targets that were well defended by anti-aircraft machineguns. Low flying fabric-covered aircraft were easy targets even for hand-held weapons. In air combat, an unloaded Avia B-534 was faster and had a better climb rate than the Fiat C.R.32bis. But, on the other hand, the manoeuvrability of the C.R.32bis was superior. When the Avia B-534 entered air combat fully loaded with bombs, the tactical advantage changed to the adversary's side. The multi-purpose Letov Š-328 was already outdated in all aspects and thus vulnerable to any attack.

Hungarian bombers during the Two Day War

The highlights of the air fighting in Ruthenia, called also "The Two-Day War", were the following bombing actions.

The first one, still controversial today, was an air raid on Užhorod. Hungarian sources say that on March 24, 1939, a single Slovak Letov Š-328, in foggy weather, flew over the town at 1145 hours and unsuccessfully bombed the bridge over the Uh River. A *Raj* of three Fiat C.R.32bis of 1/1 *Vadászszázad* was sent from the local airfield to intercept the Slovak intruder, but the Š-328 vanished in the fog. Slovak sources do not mention this action. The probable reason for this secrecy was the fact that the Slovak side did not want to admit the possibility that one of its aircraft, supposedly from 12. *pozorovací letka* (with either pilot *svobodnik* J. Kolembus and observer *porucik* M. Udut, or pilot *svobodnik* J. Maco with spotter/gunner *nadporucik* M. Guljanic) had entered Hungarian air space.

The second bombing-action was the MKHL air raid on Spisska Nova Ves airfield. Based on aerial reconnaissance by the Heinkel He 70F of 1. *Őnálló távfelderítő* and 2. *Őnálló távfelderítő*, and interrogation of a captured Slovak pilot, *svobodnik* J. Zachar, the commander of the MKHL decided to immediately bomb this most important of the SVZ airfields. The time of the raid was set for between 1700 and 1730 hours. The timing of the raid was critical since it would allow a MALERT Junkers Ju 53/3m on a regular flight from Budapest to Warsaw to be clear of the area before the raid began. Over-flights by civil aircraft flying this route were controlled by the Military Meteorological Station No 17 at Spisska

Nova Ves airfield, and it was assumed the station would not be functional after the raid.

The first attack would be made by 18 Junkers Ju 86K-2 of 3/4 *Kyrályi Bombázószázad* and 3/5 *Kyrályi Bombázószázad*, based at Debrecen airfield and led by Major E. Kovacs. The second group was made up of Ju 86K-2 of 2/3 *Kyrályi Bombázószázad* "*Buzogany*", located at Tapolca airfield and led by Major Podhrzasky, and nine bombers of the same type of 2/5 *Kyrályi Bombázószázad* "*Halal*", stationed at Szombathely. Both groups would meet over Miskolc at 1600 hours where 27 Fiat C.R.32bis of 1/1 *Vadászszázad* (commanded by Flying Officer B. Czemke), 1/2 *Vadászszázad* (commanded by Flying Lieutenant I. Timar), and 1/3 *Vadászszázad* "*Puma*" (commanded by Flying Officer Aladar de Heppes [Note 3]) were waiting as fighter-escort. Each Fiat C.R.32bis was carrying eight 20 kg bombs. Major Podhrzasky was appointed leader of the two-phase raid.

The command of the MKHL had hoped to inflict substantial losses on the SVZ, but it turned out to be a fiasco. Because of logistical chaos, poor timing, navigational errors, etc., only 10 Junkers Ju 86K-2 reached the target. At 1645 hours, this formation led by Flying Lieutenant Vaghrel dropped about 7,200 kg of bombs from 500 m. The bombs hit a nearby brickworks, the barrack yard, timber stores, and the runway. Many of these bombs did not explode due to the sodden ground. Bomb splinter and machine-gun fire damaged two Avia B-534, three Letov Š-328, one Aero AP-32, and one Avia B-71 bomber. As there was no effective anti-aircraft defence or warning system at the airfield, human losses were quite high: 12 dead and 17 injured. One Avia B-534, piloted by *cetar* F. Cyprich from 39. *letka* managed to take-off during the bomb-raid, but he could not catch up with the Hungarian bombers. Although the Hungarian press evaluated this action as a great success, the MKHL command relieved Major E. Kovacs of his command.

On March 25, 1939, the commander of the SVZ, *podpulkovnik* Jan Ambrus, visited the airport of Spisska Nova Ves and planned to organize a retaliatory air raid on Budapest, which would be made by the Letov Š-328, escorted by Avia B-534. This bombing raid was not carried out as both air forces ceased their activities after March 24.

Slovak forces quickly pushed the Hungarian troops from the occupied territories and an armistice was signed on March 26, 1939, but in the following negotiations, under pressure from the German government, Slovakia had to surrender 78 villages and small towns in a 20 km wide belt along its eastern border with Hungary. Hungary would keep its newly gained area - at least for the next six years.

Aftermath

The "Two-day War" took its toll of victims even after it ended. On March 31, 1939, the commander of II/3 *perut*, *stabni kapitän* Alois Zmatlo, ordered a transfer flight of bomb-loaded Letov Š-328 to fly from Spisska Nova Ves to a provisional airfield at Mecedelovce. The aircraft of 12. *letka* took-off first. Unfortunately at the same time *vojín* S. Hodur was removing a machinegun magazine from the Avia B-534 that was abandoned on March 24 at the airfield edge. Letov Š-328 (c/n 222) with *porucík* A. Slodicka at the controls and *podporucík* L. Sulik in the observer's seat, hit the aircraft stuck in the soggy ground. An explosion followed, killing both crew members and Hodur. For his negligence, commander Alois Zmatlo was immediately relieved of his duties and command was taken over by *stabni kapitän* J. Durana.

Notes

1. Later in World War Two, Captain Aladar de Heppes was commander of the famous 5/1 *Vadászosztály* (Fighter Group) "*Puma*", equipped with Messerschmitt Bf 109G's and scored ten air-victories.
2. Svobodnik J. Zachar's Avia was then transported to Budapest. After an overhaul, it served in the MKHL with code "G-192". In 1943, it was marked as "HA-VAB" and was flying for the Hungarian Aero Club in Györ. In February 1945 the biplane was destroyed to avoid capture by the Red Army.

Terry Judge (SAFCH # 1454, Canada) writes: "I came across this site:

http://surfcity.kund.dalnet.se/cr32_hungary.htm
It is a pretty detailed look at Day 1 of the war with lots of extra information on the Hungarian personnel involved, as well as additional info on the Slovak pilots of the Avia B-534 involved."

Dutch Museum Buffalo

Frans Scheve

In the spring of 2009, the Dutch military aviation museum in the Soesterberg (NL) was able to add a new item to its collection in the form of a replica Brewster Buffalo like those used in the Netherlands East Indies (NEI) a country now called Indonesia. This replica was built in the USA by the Cradle of Aviation Museum on Long Island, NY, and they did a very great job.

After so much effort had been spend to get a replica of this famous NEI fighter, it is strange to learn that it still has not been put on display for the general public. It is stored in a hanger that can only be visited during the Dutch National Museum Weekend.

The Buffalo wears the markings used by the *ML/KNIL* during WW2 and the name of sergeant airman Gerard Bruggink.

With the arrival of the Buffalo replica, the question revived "What colors were used on NEI planes?" For a long time the colors were described as equal or similar to those used in many British schemes: dark earth, dark green, and sky undersurface. With the discovery of some old aircraft parts and the recollection of servicemen from that era, it was determined that the *ML/KNIL* used the colors *jongblad* & *oudblad* ("new leaf" and "old leaf"). These were meant to represent the foliage of the tropical rain forest. Since there is no defined Spring or Autumn in tropical areas, trees are green all year around and the renewal of foliage depends on the species, weather, and time of year. One remarkable thing is that many species renew their foliage with olive-drab/greenish-brown looking new leafs. The older – chlorophyll stacked – darker green leaves stay on until worn-out and fall down yellow or brown.

To my surprise, the "new leaf" and "old leaf" scheme on the replica has resulted in a grass green and dark green combination. All undersides appear to be light grey, while aluminum dope seems to be the standard finish used on *ML/KNIL* aircraft during that time. In the absence of exact color identification, a rough indication of colors used on the replica might be: grass green Humbrol 80, dark green Humbrol 116,

light grey Humbrol 28. See drawing for camouflage pattern.

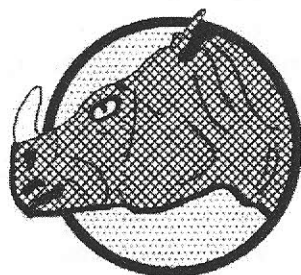
Explanation of notes on the drawing

- 0- All mentioned markings applied on both sides of the aircraft.
- 1- Black & orange triangles in four positions.
- 2- Aluminum colored wheel bays and engine exhaust plate.
- 3- Black propeller blades with yellow tips.
- 4- Small registration number in white on wing front edge.
- 5- Large registration number in white on rear fuselage.
- 6- Black walk-ways on wings.
- 7- Wings omitted for clarity.
- 8- Service marking in light grey "*MINJAK*" = Oil. (port side only).
- 9- Service marking in light grey "*MENGANGKAT DISINI*" = Lift here = Indonesian words for lifting the aircraft.
- 10- Service marking in light grey "*HIER OPTILLEN*" = Lift here = Dutch words for lifting the aircraft.
- 11- Pilots name – BRUGGINK – in white.
- 12- Unit emblem – Javan Rhino (in black-white-yellow-olive drab).

If you want to build a scale model of this particular aircraft, the 1/72 scale range offers plenty of choice and a lot of conversion material. Decals are available from the Dutch Decal and Tally Ho! ranges (resp. 72011/72030 and 7008/7137). The company White Ensign Models offers a three 14 ml tin combination for Oldleaf-Newleaf-Aluminum paint. A very good source on colors, markings and history of all *ML/KNIL* Buffalos can be found in the publication Brewster B-339C/D/-23 from Dutch Profile publications.

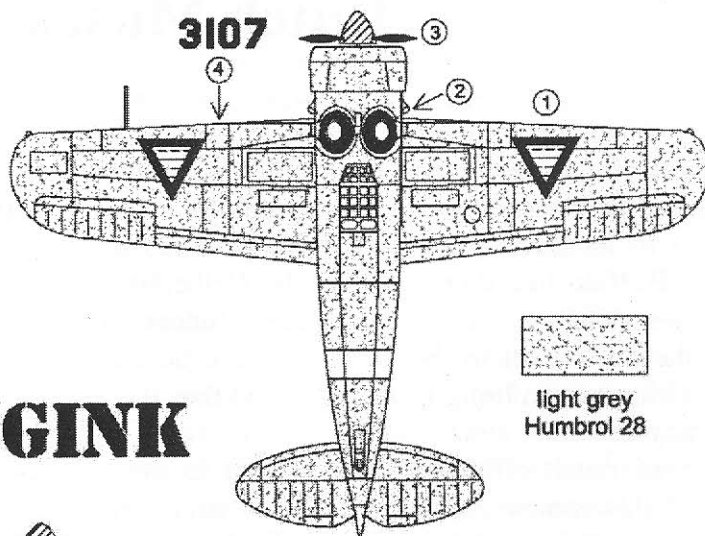
Frans Scheve, (SAFCH #890), The Netherlands.

replica NEI air force
Brewster Buffalo
Militaire Luchtvaart Museum,
Soesterberg, the Netherlands

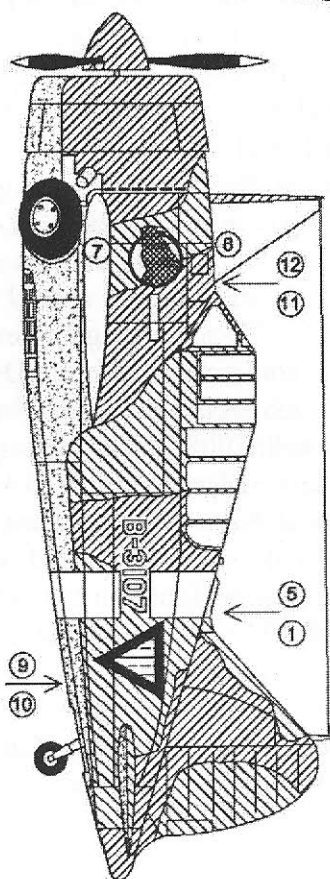
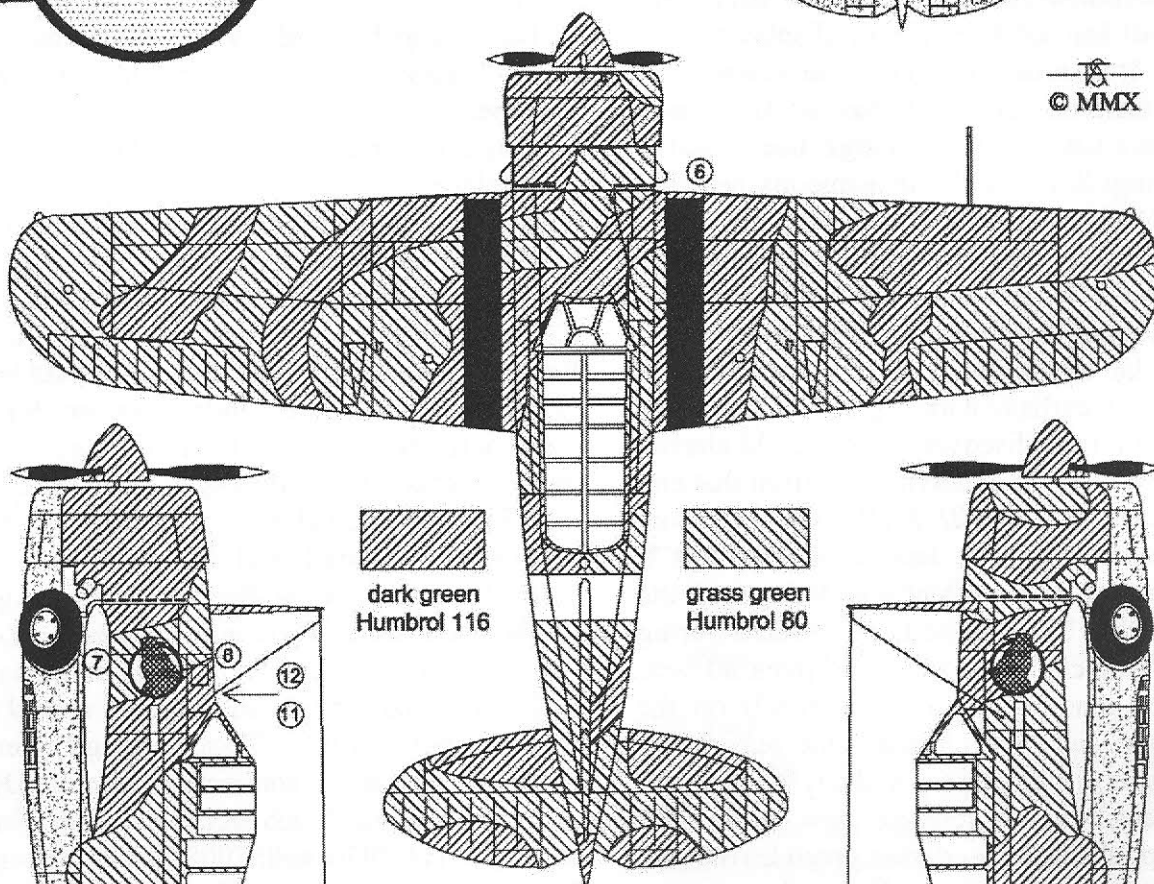


BRUGGINK

12 11



© MMX

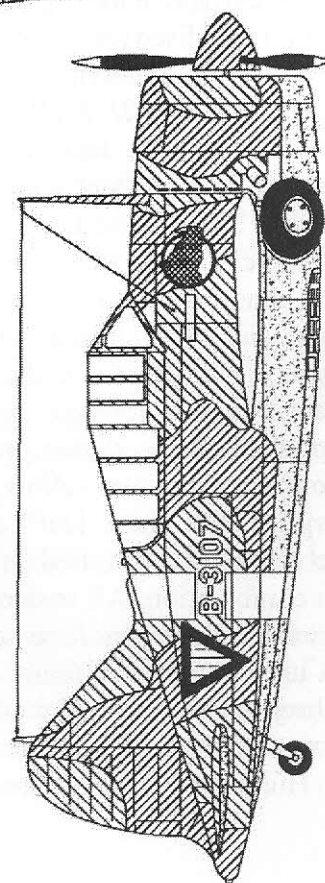


B-3107

MENGANGKAT
9 DISINI

HIER 10
OPTILLEN

MINJAK 8



Nothing more than his duty

[Editor's note: The following is a translation of a newspaper article about the Dutch pilot who flew the Brewster Buffalo represented by the replica in the Dutch Museum. This article first appeared in the Dutch newspaper *De Twentsche Courant Tubantia*, 28-03-2009, and was written by Alphons Weierink. The translation is by Frans Scheve.]

It is his last mission as fighter pilot in the Netherlands East Indies (NEI). One day before capitulation, March 1942. Only four Brewster Buffalos are available on the airfield Andir near Bandoeng on the island of Java. The fact that he was married the day before doesn't hinder sergeant airman Gerard Bruggink from Harbrinkhoek village (Tubbergen town) to report voluntarily for what was to be his last air combat. With him were his friends, Deibel and Scheffer of the legendary 5th Aircraft Group from Buitenzorg. Captain Van Helsdingen, leader of the squadron, decides to take command of this mission.

The fact that this mission is almost suicidal is known to the dauntless airman. They are aware of the overwhelming power of the Japanese enemy in NEI airspace, both in numbers as in a technical sense. The American airplane is unsuited to combat the Japanese in the air. Nevertheless, the 24 year old Gerard Bruggink, nicknamed "Tub" - from Tubbergen his home town - has no doubts. He sees it as his military duty to go in to battle. His motto: "Don't talk, just act".

It is late afternoon when the four Brewster Buffalos take off, unseen by the Japanese patrolling overhead. Their mission is to give air support to ground forces in the Djati-pass enveloped by the advancing and supreme Japanese enemy.

Van Helsdingen and Bruggink fly next to each other at tree top height; Deibel and Scheffer fly somewhat higher. When Bruggink sees Japanese fighters, he signals captain Van Helsdingen with the wings of his Brewster Buffalo. He then dives into the attack, firing his machineguns at the enemy on the ground. The airborne Japanese see their prey and start the chase. The battle is uneven: 27 Japanese against the four KNIL pilots. Nevertheless, they succeed in shooting down four Japanese.

Deibel and Scheffer are shot down and are injured. Captain Van Helsdingen dies. His plane was later on found in the sea. Gerard Bruggink - despite the air superiority - succeeds in fleeing to Borneo. But when he steps out of his plane, he is immediately taken prisoner. The Japanese had taken over the island. This is the beginning of three and a half years internment, only ending by the capitulation of Japan on 15th august 1945.

All the time his parents, brothers, and sisters in Harbrinkhoek, Holland, were uncertain about the fate of Tub Bruggink. The first sign of that he is alive was received through a note that had been posted just before the end of the war describing that he was in a Japanese prison camp. Not

much later the family heard that NEI *Radio Oranje*, exile Dutch radio in war time, had mentioned that a KNIL fighter pilot named Gerard Bruggink was recommended for a high military decoration.

Ben Bruggink, a younger brother of Tub, still remembers the joy expressed at the small rented farmhouse of his parents in Harbrinkhoek village. "My father and mother were ecstatic. They had not much hope left that he was still alive and would ever return." He stops talking for a moment. Even though it was 64 years ago, Ben Bruggink, an Oldenzaal resident in his early 80s and former teacher of English and gymnastics, still remembers 'it all' very distinctly. He also clearly remembers Tub's homecoming after a long journey by ship at the end of 1945. "We were all waiting for him and, as it turned out, he also brought along his wife Corien. Unknown to us he had been married just before getting captured. His wife had also survived a Japanese prison camp. They met each other in Bangkok after the capitulation."

Ben Bruggink knows the moving and above all adventurous life story of his older brother like no other. Starting as a student for the priesthood, Tub became a heroic war pilot, decorated with the military *Willems Orde* for his courage. After the war he built up an impressive career in America as an international respected authority in flight safety. His famous brother, was invited by Prince Bernard to Soestdijk Palace several times to talk about their common interest - aviation.

Of all Brewsters that were in service with the KNIL (Koninklijk Nederlands Indisch Leger or Royal Dutch Indies Army) not a single one has survived. This was a good enough reason for the Soesterberg Foundation Friends of the Military Aviation Museum to have such a plane constructed in the US and to give it a permanent home in the Soesterberg museum as an addition to a rich Dutch aviation history.

Because Gerard Bruggink was the last living Dutch Buffalo pilot, and, even more important, because of his excellent war record, the full-scale replica has been painted in the same colors of the plane Bruggink used during his last battle against the Japanese. The plane wears his full name, registration number B-3107, and unit emblem of the (Asian) Rhinoceros.

This replica is not only an honor to the Brewster B-339, it is also an honor to the man that made 250 missions in the Buffalo over the Dutch East Indies. "It absolutely is 'his' plane", Ben Bruggink nods. During his career as pilot Tub flew 42 different type of aircraft but the Buffalo was his favorite.

The two sons of Gerard Bruggink, Peter and Eric, attended the unveiling of the replica, coming all the way from Alabama, America. The US Air Force and Royal Dutch Air Force were also represented. From Twente region, a large and proud family group was present. For them the proverb closing the circle comes true.

As a twelve year old boy from the Twente farm lands, Gerard Bruggink started studies at a seminar near Soesterberg to become a priest. This seminary was very close to the present day aviation museum (MLM / *Militaire Luchtvaart Museum*). After a while the young Bruggink discovered that priesthood wasn't his thing. He was much attracted to the flying conducted at the nearby flying base Soesterberg. But there was no money to finance such expensive flying training.

Four years later, when he was transferred to another seminary in the town of Uden, far from any aircraft, Gerard Bruggink decided to quit his studies for the priesthood. He returned to Harbrinkhoek and entered the HBS – a high school successor – in the town of Almelo. He ended this study premature and, in March 1938, he volunteered for the Grenadiers in The Hague.

Ben Bruggink continues: "This was nothing like him. He described his situation there as being desperate. But by coincidence an escape was presented. One night, too broke to go out for a drink, having written some letters his eye fell on a newspaper advertisement looking for young men willing to start pilot training free of charge to become pilot in KNIL air force in the Netherlands East Indies. This was his chance. Without hesitation and without asking advice to others he applied. Within a few days he received a letter, with an enclosed free train ticket, inviting him to have an interview in Soesterberg.

"As it turned out he was one of fifteen, from a total of five hundred candidates, to enter the pilot training. Only after all preparations were fixed did he inform his parents. His mother was pleased that he finally had found something he wanted. His father didn't say much. Two months later Gerard Bruggink left by boat starting his great adventure, not knowing he would be confronted with war soon after having finished his pilot training.

"The common-sense farmer boy from Twente country knew no fear. Regardless the times he faced death, this Sergeant pilot always got away with his whole skin. He was never shot down and never got injured. For Tub Bruggink it all was un-heroic; he was just doing his duty.

Characteristic are his remarks about the almost daily attacks he made on the Japanese transport fleet: "Nothing much to tell about. Easy job. Just position the plane nose down above the ship and push the button. You can't miss."

Ben Bruggink recalls: "He later on often told me that he, unlike many others, had all the luck all of his life. Also during imprisonment, he got severely sick several times but survived each time. At the moment when all prisoners were due to be shipped to Japan, he was exempted. As it later turned out, all these ships were bombed, killing all on board."

From 1947 to 1950 Gerard Bruggink was back in the Netherlands East Indies, being active as instructor and test pilot. While there, in 1949, he also got awarded the Dutch medal *Militaire Willemsorde*, a decoration in the line of other war heroes like *Schout-bij-nacht* (rear Admiral) Karel Doorman, who received this medal posthumously.

He returned to Holland, and from 1951 to 1955 Bruggink made bivouac on several Dutch airbases like Twenthe,

Woensdrecht, Gilze-Rijen, Volkel, and Eindhoven. For a short while he settled down in the quiet village of Glanerbrug close to the German border, but then, by now, Lieutenant pilot wasn't able to find his true calling in the Netherlands.

Ben Bruggink again: "Holland was all too small and the people too narrow-minded. He was also afraid of an invasion by the Russians."

In the autumn of 1955 Gerard Bruggink emigrated with his wife and their two children to America, for good. For him, America was the country of limitless possibilities, as it turned out. The first years when he wasn't a US citizen, he had several jobs in civil aviation, like being instructor-pilot. Upon becoming a US citizen, he got a job in military aviation. From 1963 to 1969, he worked at the United States' largest helicopter base, Fort Rucker, where pilots were being trained for the war in Vietnam.

After this, he developed himself as an international authority on flight safety, rising to become director of the National Transportation Safety Board. He was involved world wide in researching aviation accidents. Among these was the biggest aviation disaster in history; the collision of a KLM and a Pan Am airplane on the runway at the island of Tenerife.

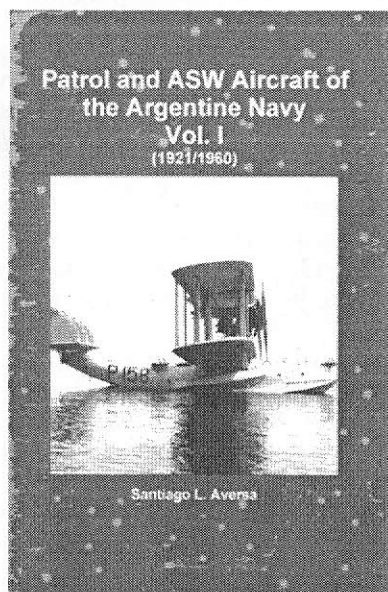
Ben Bruggink: "The things that kept my brother busy most of the time were the human factors leading to flight accidents. In the Tenerife disaster, he discovered that, in order to prevent a fine, the KLM captain had been in a great hurry to takeoff. The co-pilot had been intimidated and didn't dare to tell him there was no permission to start. According to him, the largest risk factor on all occasions was the human factor.

"When we fetched him from Schiphol airport he would have preferred to stay in the trunk of the car. According to him the Netherlands were much too dangerous, especially with all those people behind the wheels."

While in America Tub Bruggink didn't forget his parents and family. Several times he made a trip from America to Harbrinkhoek. Ben Bruggink: "What he had liked most was to have seen his parents emigrate to America to share in his wealth. A striking thing is that he was present both times when first my father and later on my mother died. The night before, he had a small drink with my father and watched over him all night until he died in the morning. The same with my mother: he came over, took watch all night, and in the morning she died."

In 2005 Gerard "Tub" Bruggink himself died at the age of 88, on his earthly paradise, a former Alabama peanut plantation. His funeral was one with all military honors.

Gerard Bruggink's oldest son, Peter (62), will be present at the homage in the aviation museum and he will deliver the eulogy. "It will be a small speech", he emphasized when calling from Alabama. "It's all in the spirit of my dad. Of course I'm proud of him. But I respect him the way he was: A very modest man who regarded himself anything but special. For instance in the war, he thought that he had done nothing less or more than other soldiers would have done. He was just doing his duty."

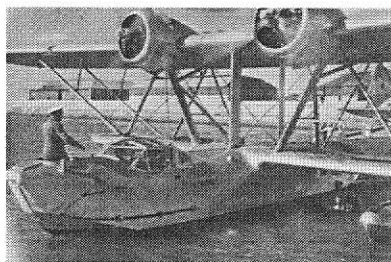


Patrol and ASW Aircraft of the Argentine Navy: Volume I (1921/1959), by Santiago L. Aversa. ISBN 978-0-557-22402-9

The author e-mailed me a copy of his book for review in SAFO. The aircraft covered are: D.E. Type Patrol Airship (4), Supermarine Southampton Mk. III (6), Consolidated Ranger (6), Grumman Goose (5), Consolidated Catalina (5), Martin Mariner (4), Lockheed Neptune (4), Argentine Navy Patrol and ASW aircraft individual histories: 1921-1960. The number in parenthesis is the number of photos of the aircraft.

Each aircraft is covered in sections on: Design and Development; In Argentine Service; Operational Highlights; Technical Data; Preserved Aircraft and Survivors; and a small 3-view drawing. (A minor quibble is that the 3-view in the Mariner section is actually that of a 4-engine Coronado.)

Several examples of the coverage directly related to Argentine service follow:



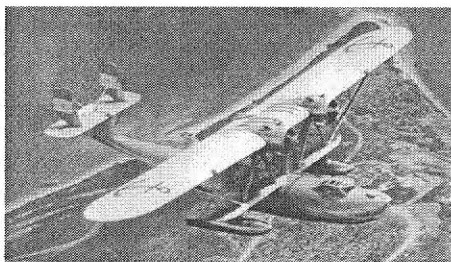
Southamptons in Argentine Service: During Marcelo T. de Alvear's presidency (1922-1928), Navy Minister Vice-Admiral Manuel Domecq García secured a bill of congress allocating funds for a comprehensive naval rearmament program. While some of the objectives were not attained (such as the purchase of a light aircraft carrier), most did. Among these objectives, there was a revitalization of Naval Aviation. The air arm had, until then, been using mostly donated airframes, rushed into service without a master plan. So, a credible naval aviation force was planned, and it included patrol aircraft.

Hence, an order was placed with Supermarine Aircraft for eight Southampton Mk. III (Metallic wings) aircraft. These aircraft were delivered in 1929, and made up the Patrol Squadron.

These aircraft were the starting point of maritime aviation doctrine in Argentina, allowing for long patrols to screen routes for the fleet, as well as protecting merchant shipping.

Southamptons were noble, reliable aircraft, and lasted for almost two decades, ending their active service in 1948 as trainers for the Naval Aviation School, then based at the Puerto Belgrano Naval Base.

Operational Highlights: "Besides patrol, training and liaison sorties, Southamptons had the rare historical privilege of transporting, in the same flight, two future kings of England. Namely, His Royal Highness the Prince of Wales (who was later crowned as King Edward VII), and his brother Albert (who was eventually crowned as King George VI), during the princes' visit to South America, in 1931.



Consolidated Rangers in Argentine Service: In 1936, the Argentine Navy bought six P2Y-3A Rangers from

Consolidated to equip its Patrol Squadron flying out of the Puerto Belgrano Naval Air Base. The aircraft arrived disassembled and were put together by mechanics at the Puerto Belgrano base.

The Rangers replaced the Supermarine Southampt flying boats, and are considered the first true patrol aircraft of the Argentine Navy. While the Patrol Squadron had been commissioned in 1930, coincidentally with the arrival of the Southamptons, the new aircraft brought new capabilities.

The Argentine Rangers were armed with three 7.65mm machine guns, and were the mainstays of Naval Aviation for almost a decade. Facing obsolescence by the end of World War Two, circa 1947 they were transferred to the Naval Aviation School. The last Rangers ceased to fly in 1949, and were subsequently discarded. There are no known survivors of this type of aircraft.

Operational Highlights: several raids to the Southern part of the country (Patagonia) were carried out. Furthermore, in 1940, an endurance raid was made, reaching the Malvinas (Falkland) Islands. During WW2 they carried out patrols in order to preserve Argentina's neutrality at sea.

The paperback version of this book is available for \$11.00 US + S&H from <http://stores.lulu.com/bitacorabooks> lulu.com. The Internet version of this book is also available for \$5.00 from the same e-mail address. All major credit cards are accepted. The books are printed and shipped from the US! This book is also available from amazon.com for \$11.00.



North American T-28 Fennec, by Jorge Félix Núñez Padin. Serie Aeronaval #28. 44 pages, 20 cm by 28 cm landscape.

Soft cover. (2010) ISBN 978-987-1682-02-7. E-mail: fnpadin@yahoo.com.

Our Argentine friend, Jorge, has produced another one of his excellent series of monographs on Argentine aircraft. This one features the North American T-28 Trojan, aka Fennec. Produced in the now standard landscape format, and still with the same high-quality glossy paper, this issue cover the seventy-one T-28 used in Argentina including those that were later transferred to Uruguay.

A list of the chapter heading will illustrate the depth of coverage: "Historia", "2° Escuadrilla Aeronaval de Propósitos Generales", "Escuela de Aviación Naval", "1° Escuadrilla Aeronaval de Ataque", "1° Escuadrilla Aeronaval de Ataque", "Aviación Naval Uruguay", "Técnica", "Colores & Insignias", and "Historias Individuales".

The Argentine T-28s had a long and colorful career. As an example, consider the history of this peripatetic Trojan: "0554 T-28A-NI Trojan (msn 174-232) Ex USAF 51-3594 Convertido a Fennac, ex Armée de l'Air n°94. Asignado a la Base Aeronaval Punta Indio en 09.66 coma 0554/EAN-118 de la Escuela de Aviación Naval, siendo rematriculado posteriormente 0554/1-A-267. Sin servicio por falta de motor desde 04.70 a 04/72. Descargado por Resolución n°823'C'/79. Transferido el 16.11.79 a la Aviación Naval Uruguay, asignado al Escuadrón de Ataque como 401. Overhaul en Uruguay concluido el 29.12.82. Remotorizado con Wright R.1820-86B. Puesto en reserva en 1992. Último vuelo 14.06.95. Vendido en 1999 y exportado inicialmente a EE.UU., como N90535. Exportado a Canadá, registrado C-GHRV de Phonix Hangar Inc. (Victoria/British Columbia). Activo."

I've quoted extensively from the "individual history" section of this book to give some idea of the depth of information provided and to show that the reader with a limited knowledge of Spanish can still get much from a careful reading of the text.

However, the main strength of this book (and the entire series) is the illustrative content. There are 34 color photos (including 4 of Fennecs in Uruguayan markings) and 62 black-&-white photos (including 4 of Fennecs in Uruguayan markings). The color

drawings are, as usual, excellent: 7 color profile drawings (including one in Uruguayan markings) and a 2-page centerfold color profile of Argentine 3-A-205 with a one-page color top view of the same aircraft.

The Argentine T-28s initially were assigned to the Escuela de Aviación Naval and were in natural aluminum with black antiglare panels and markings. Later, when assigned to 2° Escuadrilla Aeronaval de Ataque for operation from the aircraft carrier ARA "25 de Mayo", the color scheme was changed to "gris nevado" (FS36440) and "blanco nube" (FS37875). The Fennacs that participated in "Operativo Tronador" received a tactical camouflage consisting of three tones of "verde y ocre" with "gris claro" undersurfaces. The Uruguayan T-28s had "gris claro" undersurfaces and "blanco" undersurfaces.

This book is highly recommended to everyone interested in Latin American aviation. The modeler, in particular, will appreciate the variety of color schemes applicable to Argentine T-28s, and how can any rabid small-air-force modeler not be attracted to the idea of modeling a T-28 in Uruguayan markings.

This book is available from the SAFCH Sales Service for \$17.00 in the USA and \$20.00 elsewhere.



The Black Bats: CIA Spy Flights over China from Taiwan 1951-1969, by Chris Pocock with Clarence Fu; published by Schiffer Publishing Ltd., 6" x 9" 144-page HC with 64 pages of b/w and color photos, and dust jacket with two color illustrations.

What do you get when Chris Pocock, a British writer, researcher and consultant, who specializes in aerospace, airfreight, defense, and intelligence,

teams up with Clarence Fu Jing Ping, who is a noted aviation historian in Taiwan (ROC)? One of the fruits of their collaboration is the publishing of *The Black Bats*, which this writer thinks is the most authoritative account and the definitive book on the CIA covert fights over China during the years 1951-1969. The book is divided in the following eight chapters: (1) 1951-1953: Covert night missions with B-17, B-25, and C-47. (2) 1953-1956: Covert night missions with C-46, B-24, B-17, B-26 (A-26), and P4Y. (3) 1956-1957: Covert night missions with P2V-7 (RB-69) (4) 1958-1959: Covert missions with B-17, and B-26 (A-26). (5) 1960-1961: Covert missions with the last B-17 and P2V. (6) 1962-1963: Airdrop missions with C-123, C-54, and P2V. (7) 1964-1969: Covert missions with P2V and P-3. (8) Southeast Asia 1961-1973: The CIA 'subcontracts' covert airdrop over North Vietnam to Taiwan flying C-123, C-54, P2V, and from Laos with Twin Otter and S-58T.

The detailed accounts in these eight chapters are complemented by Author's Note, Forewords, Prologue, Epilogue, Secondary Sources, Other Sources, Author's Acknowledgments, A Note on Aircraft Serial Numbers, Glossary, Notes, and Index. For those who are familiar with the quality of Chris Pocock's earlier works, notably, *Dragon Lady - The History of the U-2 Spyplane* and *The U-2 Spyplane - Toward the Unknown*, *The Black Bats* requires no further introduction. Not only does it provide, for the first time in English, the most detailed account of the CIA's spy flights over China during 1951-1969, most of the 130+ photos included in the book are published in a Western publication for the first time.

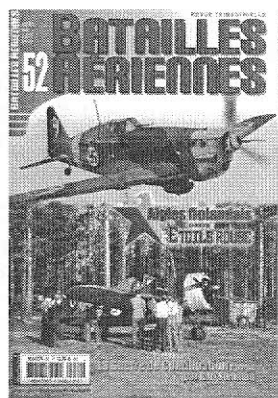
SAFO readers and model builders will be equally thrilled by the two color illustrations on the front and back of the dust jacket. Artist Chang Guo Cheng superbly executed these two illustrations, which depicted an RB-69 in ROC markings being attacked by a PLAFAF MiG-17 and a B-17 in ROC markings.

There is, however, one minor criticism: This writer believes *The Black Bats* would appeal to SAFO readers and model builders even more if it would have included Gary Lai Guo Rui's side-view drawings of the Black Bats aircraft

as the author had stipulated on page 128 of *The Black Bats*. For whatever reasons, the profiles mentioned in that page were omitted from the otherwise complete book.

The Black Bats is a readable book, which this writer was able to devour within a week while commuting to and from work riding the subway. Through the efforts of Chris Pocock and Clarence Fu, those covert CIA spy missions over China from Taiwan during 1951-1969 are finally becoming more transparent.

This book is highly recommended to SAFO readers and model builders. D. Y. Louie, P.E. (SAFCH #544), USA.



Batailles Aériennes #52. Algres finlandais contre Etoile Rouge: La Guerre de Continuation 1^{re} partie, by Kari Stenman. Lela Presse, 29 rue Paul Bert. 62230 Outreau, France. E-mail: contact@avions-bateaux.com. Website: www.avions-bateaux.com.

As usual with Michel Ledet's *Batailles Aériennes* series, this volume is chockfull of well-reproduced photos and gorgeous color profile drawings. Unusual for a series that usually cover both sides in the conflict, this volume is entirely devoted to one air force, Finland. (There are, however, a few photos of Soviet aircraft that crashed in Finnish territory.) This is not meant to be a criticism, because the coverage of the aircraft used by Finland in the Continuation War is so complete that all but the small-air-force enthusiasts with an extensive library will benefit from adding this volume to their collections.

The statistics are hardly sufficient to emphasize the value: 114 pages; 244 photos; 37 color profiles [Brewster 239 (4), Fokker D.XXI (5), Gloster Gladiator (2), Fiat G.50 (2), Curtiss H-75 (2),

Westland Lysander (2), Morane Saulnier MS 406 (2), Bristol Blenheim (4), Beriev MBR-2 (3), Fokker C.X (2), Hawker Hurricane (2), Høver HF-11 (1), Dornier Do 22 (1), Dornier Do 17Z (1), Heinkel He 115 (1), & Tupolev SB (2)]. Color 4-view drawing (Brewster 239).

The text is in French, but the listing of the titles of the chapters should give a good idea of the coverage: (1) "Vers une nouvelle Guerre", (2) "Les six jours de l'offensive aérienne soviétique", (3) "Avance en Carelie", (4) "La prise de l'Isthme de Carelie", (5) "Vers Olonets", (6) "Brève analyse pour 1941", (7) "L'année 1942", (8) "L'invasion de Gogland", (9) "Au combat contre les chasseurs Lend-Lease", (10) "Olonets", (11) "Les forces aériennes en présence le 1^{er} juillet 1942", (12) "Sur le Golfe de Finlande", (13) "Guerre anti-sous-marine", (14) "Les opérations de bombardement".

The text is supplemented by an excellent map showing the location of 48 Finnish air fields from Malmi and Turku in the south to Rovaniemi above the Arctic Circle and Petsamo on the Barents Sea. There are 3 useful tables listing the victories by Finnish pilots during the Continuation War and the monthly total of mission flow by each Finnish unit during 1941 and 1942.

Batailles Aériennes #52 is highly recommended. The modeler will drool over the color profile drawings and the diorama possibilities suggested by the photos, and the enthusiast will appreciate the many high-quality photographs. [Ed: I am continually amazed by the excellent quality of the photos taken by the Finns. They must have had the best cameras and film available at that time.]



Batailles Aériennes #53. Lorsque la RAF bombardait l'Allemagne: Les premiers bombardements de la RAF sur le Reich, septembre 1939 – décembre 1940, by Jean-Louis Roba. Lela Presse, 29 rue Paul Bert. 62230 Outreau, France.

Let me start with a disclaimer: This volume in the *Batailles Aériennes* series has absolutely no small-air-force interest. However, it is a significant addition to the literature available on the Second World War. Copiously illustrated by photos drawn from both the British and German sources it describes the early bombing campaign of the RAF. Especially revealing are photos of crashed RAF bombers and the damage done to German cities by RAF bombs. Particularly evocative is the full-page photo of a bomb crater next to the Brandenburg gate.

The French text consists of a day-by-day account of RAF bombing activities over the Third Reich including daily RAF losses. The listing of the chapters will give some idea of the textual content: (1) "La RAF sur le Reich", (2) "La drôle de guerre", (3) "La campagne à l'ouest", (4) "Hitler at Bay", (5) "A l'assaut du Reich", (6) "Conclusions finales".

There is an appendix, "Les pertes du Bomber Command sur le Reich (1939-1940)", that lists the number of RAF bomber lost by type and month. This gives a vivid reminder of the terrible loss of life experienced by RAF crews even in this relatively "quite" period of the war. The totals for the first 16 months of the war are: 111 Wellingtons, 97 Whitleys, 161 Hampdens, 93 Blenheims, 10 Battles, 10 Hudsons, 2 Ansons, and 3 Beauforts for a total of 487 aircraft.

The statistics for this volume are: 116 pages, 170 photos, 74 color profile drawings [Hampton (8), Blenheim IV (11), Wellington (25), Whitley (13), Battle (1), Hudson (1), Anson (1), Beaufort (1); Bf 109D (1), Bf 109E (4), Me 110C (5), Ar 69 (1), Ju 88C (1), Do 17Z].

Batailles Aériennes #53 is recommended to all students of the bombing campaigns of WWII. The modeler may find the color profiles repetitious, but the use of, for instance, 25 profiles of the Wellington, drives home, in a visceral way, the enormous waste of machines and men in wartime. No glory here!

Michal Ovcacik (SAFCH #1182), the Editor-in-Chief of Mark I Ltd. (E-mail mark1@cmail.cz website: www.4pluspublicatiuons.com), has announced the release of 4 new **Dozen Sets**. "This line of handbooks is aimed at scale modelers. Each title describes twelve particular aeroplanes, documented by period photos, and also brings useful detailed shots which can be utilized in finishing the models. A comprehensive decal sheet is added for modeller's convenience." Each issue consists of a beautifully-produced booklet consisting of 32 A-4 landscape pages in full color. Two pages are devoted to each of the 12 aircraft covered. The first of these pages describes the particular aircraft and its color scheme and includes 3 photos of the subject. The second page is a full-color 4-view (port, starboard, top, and bottom plan views) of the aircraft. And so on, for all 12 aircraft. The final 3 pages contain

12 color close-up photos of interior and exterior details. The excellent decal sheets are in perfect register and contain all the national insignia, unit insignia, code numbers/letter, and serial numbers to make a model of all 12 aircraft.

The booklets are the same for each set, but the decals are provided in either 1/72-, 1/48-, or 1/32-scale. So be sure to designate which scale you want when ordering. The sets are available in the USA from UMM-USA, Stevens International, in Australia by Platypus and Hylands Bookshops, in the UK by Midland Counties, Aviation Book Centre Ltd, LSA Models, The Aviation Bookshop, Hannants. The recommended retail price is £19.20, \$30.00, AU\$42.00, or €23.00. The review copies are available from the SAFCH Sales Service for \$28.00 including postage.



Aero L-29 Delfin Colours & Markings.

The aircraft covered are: Czech Republic (2), a Czechoslovak L-29 made up to represent a USAF F-84E for a propaganda film, Slovakia, Soviet, East Germany, Bulgaria, Indonesia, Egypt, Iraq, and Georgia.

The Czech a/c are finished in Light Blue-Grey overall, while most of the rest are in a natural metal finish with a protective clear varnish. The exceptions are the Slovak and Egyptian Delfins that have Sand, Khaki/Dark Green, and Chestnut Brown upper surfaces with lower surfaces in Light Blue-Grey.

The 1/72-scale decal sheet measures 195 mm by 100 mm. This booklet is also available with decals in 1/48 and 1/32 scale.



Mikoyan-Gurevich MiG-17 Colours & Markings.

The aircraft covered are: Soviet (3), Czechoslovak (2), Poland, East Germany, Bulgaria, Egypt, North Vietnam, China, & USAF. Most of these are in natural metal finish with clear varnish. The exceptions are one of the Soviet a/c in Light Grey overall, the Polish Lim-6R that has Dark Green, Middle Green, and Dark Brown upper surfaces with Light Blue below, and the USAF Lim-5 that has Sand and Khaki/Medium Green upper surfaces with Pale Blue beneath.

The 1/48-scale decal sheet measures 197 mm by 197 mm. This booklet is also available with decals in 1/72 and 1/32 scale.



Eurofighter EF-2000 Typhoon Colours & Markings.

The a/c covered are: RAF (5), Germany (2), Italy (2), Spain, Austria, and Saudi Arabia. The RAF a/c are finished in (Barley) Grey overall; the German, Spanish, and Austrian a/c are NATO Dark Grey overall; the Italian a/c is Medium Grey overall; and the Saudi a/c is NATO (Barley) Grey overall with irregular areas of NATO Dark Grey.

The 1/48-scale decal sheet measures 195 mm by 146 mm. This booklet is available with decals in 1/72 and 1/32 scale.



Lockheed T-33 Thunderbird Colours & Markings.

Aircraft covered are: USAF (2), USN, US Marines, Canada (2), Japan, Germany, Netherlands, Belgian, France, & Spain. The USAF a/c are both in Aircraft Grey overall; the USN and Marine a/c is Light Gull Grey overall; one of the RCAF a/c is glossy natural metal overall and the other is Dark Grey on upper surfaces with Light Grey on lower surfaces; the Japanese a/c is off-white overall; the Luftwaffe a/c is Dark Green/Olive Green and Dark Grey (RAL7012) on upper surfaces with lower surfaces Silver-Grey (RAL7001); the Dutch and French a/c are natural metal overall; the Belgian a/c has Dark Green, Medium Green, and Tan upper surfaces and is Light Grey below; the Spanish a/c has aluminum finish on upper surfaces and Medium Blue on the lower surfaces.

The two 1/32-scale decal sheets each measures 247 mm by 200 mm. This booklet is also available with decals in 1/72 and 1/48 scale.

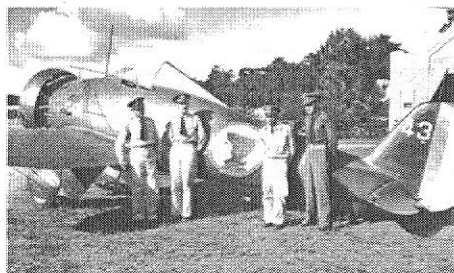
"Would you be so kind and place two questions of mine in one of the next SAFO issues.

"(1) The Guatemalan P-26s were initially painted OD overall with an unknown insignia on the fuselage sides. In a drawing in a French magazine that I found on the *Wings Palette* site, this insignia shows a knight's head. Is this correct?

"(2) In an older issue of *Insignia*, a somewhat vague photo of an Ecuadorian Sikorsky H-19 in the Quito Air Museum was published. According to the museum's homepage, this helicopter is no longer on display. Have any of our members more information about this chopper?"

Nils R. Treichel (SAFCH #1467), Germany.

[Ed: Rather than wait for the "next" issue to publish Nils' queries, I e-mailed a couple of SAFCH members, and Nils received the following answers immediately.]



"Attached is a photo showing precisely the strange badge that the Guatemalan P-26s carried for a brief period of time (The photos belongs to the Altolaguirre's family collection.) So far we haven't had the chance to determine the meaning of the head, but according to some sources, it could be a Greek god, perhaps Hermes or even a stylized Mayan god. In any case those wouldn't be wings, but some sort of feathery headdress.

"As for the Ecuadorian H-19's photo, you better contact Fernando Garrido at fernandomach3@yahoo.com, since he was working or at least collaborating with the identification of some old photos of the Quito Air Museum.

Mario Overall (SAFCH #1548), Guatemala.

"There are two H-19 FAE survivors. One is in the FAE museum in Quito which continues to be on display. All the planes there are getting a new paint job! The second, is at the air force base in Guayaquil, is in very bad shape!" Jorge Delgado (SAFCH #862), Ecuador.

"Jorge Delgado's drawings and comments on the Nicaraguan Cessna 'O-2's' were welcome, and I'm glad to see some light shed on these rather under-

documented aircraft. Strictly speaking, and just to set the record straight, these were NOT former USAF Cessna O-2 aircraft. All of the 10 identified aircraft formerly had US civil registrations and were described as 'militarized Cessna 337G's' and the designation was often arbitrarily given as 'O2-337G'. At least two others may have been acquired as replacements. The FAN serials he lists, FAN 311 to 320, are correct insofar as it goes, but at least two of these serials may have been used at least twice. I believe that only six are confirmed to have survived to pass to Sandinista use; known serials are FAS 151 to 155 and 159. The fact that '159' was used has led many to believe that nine survived to pass to the FAS, but thus far, nothing has surfaced to confirm this. I have attached an image of FAS-152, which came to me via friend Dr. Gary Kuhn, and although not of the highest quality, it shows yet another camouflaged scheme, and the fact that at least this aircraft had a prop spinner on the nose.

"I was pleasantly surprised to see the illustration of the 'Contra' aircraft, as I have never seen a shred of documentation on these slippery aircraft. I wonder what Jorge's source was for this drawing?" Dan Hagedorn (SAFCH #394), USA.

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Worldwide Military No. 1. Photo-reference CD. Aero Research Co. 6468 Valley Wood Dr. Reno, NV 89523-1263.

This CD-ROM contains 155 photos of various types of aircraft from 34 different air forces. All the photos are of modern aircraft with lots of F-16, F-4, C-130, F-5, F-104, etc. Many are of aircraft serving with the RAF, France, Italy, Japan, Germany, Canada, Netherlands, Belgium, etc. However, there is a good sprinkling of exotic small-air-force subjects, including: Afghan II-18, Algeria II-76, Botswana BAC 167, Cameroon - 130, Chile PD-7, Iran CH-47, South Africa Brosboek, Tunisia F-5F, Zimbabwe Hawk, and many more.

AeroResearch informs me that there

are many more CDs in their our line, each with a minimum of 150 photos per volume. New releases are published at a rate of eight new titles per year. CDs current available are:

- 1001 USN F-4 Phantoms Pt.1
- 1002 ADC Interceptors
- 1003 USN/USMC Skyhawks Pt.1
- USAF F-4 Phantoms Pt.1
- 1005 P-3 Orion
- 1006 F-105 Thunderchief
- 1007 USAF F-4 Phantoms Pt.1
- 1008 USN/USMC Phantoms Pt.2
- 1009 USAF Collection No.1
- 1010 USN/USMC Collection No.1
- 1011 F-16 'Viper' Pt.1
- 1012 A-6 Intruder & Prowler
- 1013 USN/USMC Collection No.2
- 1014 US Army Collection No.1
- 1015 USAF Collection No.2
- 2001 Propjets No.1
- 2002 Classic Prop liners No.1

- 2003 Early Jetliners
- 2004 Classic Prop liners No.2
- 3001 Unlimited Racers, 1964-1974
- 3002 Warbirds Collection No.1
- 3003 T-6 Racers, 1971-1977
- 3004 Warbirds Collection No.2
- 3005 Warbirds Collection No.3
- 4001 Skyraider
- 5001 Fire Tankers Pt.1
- No. 5002 Fire Tankers Pt.2
- No. 5003 Civil Collection No.1
- No. 5004 Fire Tankers Pt.3

These CDs can be ordered directly from Aero Research at \$12.95 each, plus shipping: \$2.50 in the US, \$3.00 to Canada and Mexico, \$5.00 airmail to the rest of the world, for each CD. Payment can be made by cash, check, or money order in US funds. Inquiries and orders can be made by email at AeroResearch@Charter.net.

"I have learned that Gunars Zulis, the man behind www.latvianaviation.com, passed away early this year. His wife told me that she will try to keep the website on the air and to preserve the accumulated data." Frits Gerdessen (SAFCH #12), Netherlands.

[Ed: This is the best website that I've ever seen; it is well organized, thoroughly informative, and free of gimmicks so it downloads quickly. I urge all SAFO readers to visit this site to encourage its continuation.]

The website begins with and a history of the Latvian national insignia: "Let us deal with this issue right off the top. You will notice that many of the aircraft depicted on this site carry the insignia commonly known as the swastika. I am very aware of the painful association which many of us have with this symbol. Please understand that the symbol had a history and usage which dates from long before the Nazis co-opted it. In Latvia, it was called the *Ugunskrusts* (which translates as 'fire cross') and was a positive cultural symbol centuries before the first Nazi was born. The Latvian aviators adopted this symbol in 1919, and its use continued until 1940. The symbol appears here in this historical context only. It would be a great error for the

reader to infer any political statement from its inclusion here."

The website is divided into major sections:

Locations: Aerodromes; Other Locations.

Aircraft: Pioneers; Air Force; Naval, National Guard; Purchases Not Realized; Civil & Sport; Air Transport; Civil Registry; Gliders.

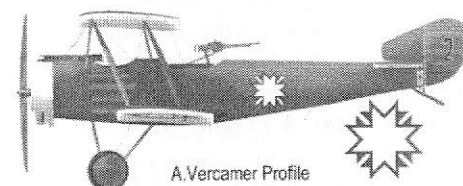
People: Aviators; Aircraft Designers; Others; The Clifford B. Harmon Award Winners.

Events: Aviation Festivals; Historical Flights; Losses and Incidents; Other Events.

Latvian Aviators in World War II: The Soviet Limited Occupation (1939-1940); Soviet Occupation (1940-1941, 1945-1990) The Gulbene Squadron, Other Latvian Aviators in Soviet Service; Transition - Germans Invade, Soviets Depart (1941); German Occupation (1941-1945), Liepaja-Grobini Training Facility, The Latvian Squadrons, The Latvian Fighter Pilots.

This illustrates the quantity of material. To illustrate the quality of the material, here is an example of what you will find in the sections on **Aircraft**. Each aircraft is illustrated by one or more color profile drawings (by the noted aviation artist Arvo Vercamer), a number of photos, and a year-by-year chronology

of each individual a/c of the type. Under the entry on the *Aizsargi* (National Guard) Sopwith ½ Strutter, there are three color profile drawings



and 13 photos as well as the usual year-by-year history of each of the five ½ Strutters used in Latvia.

In conclusion, [latvianaviation.com](http://www.latvianaviation.com) is an ideal website that should be emulated by anyone setting up a site.

"The book *Turkish Air Force 1913-2009*, an official publication of the Turkish Air Force, can be downloaded cost free at this site: <http://www.hvkk.tsk.tr/PageSub/BasinDuyurulari/Haber/HaberDetay.aspx?HID=1299>.

"I haven't done it yet, because it is fairly big at 271 Mb, but I am sure it will be of great interest to many SAFO readers. Unfortunately, it is in Turkish." Roberto Gentili (JP4), Italy.

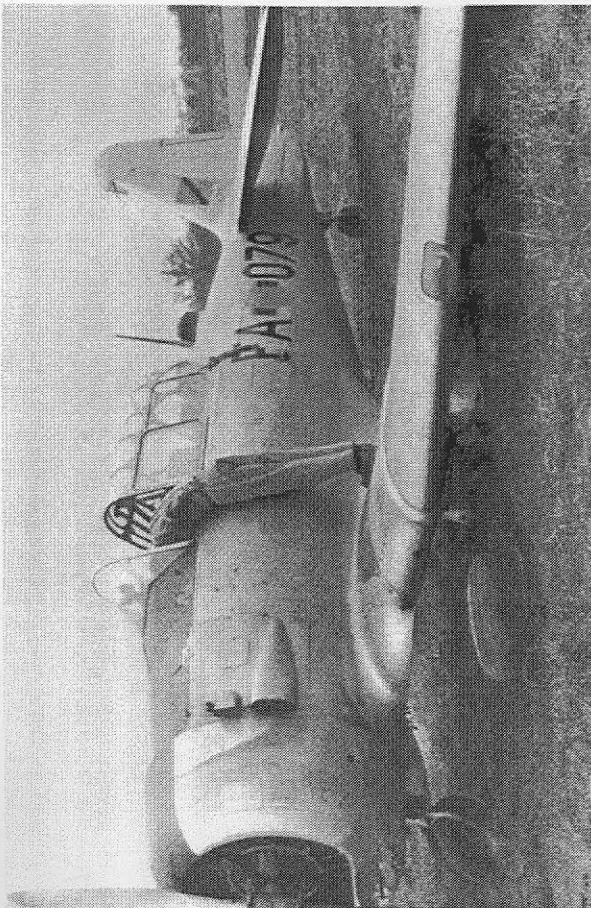
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Disposal: "With all the other things going on in my life it does not appear I will get around to building any of the 600 plus kits I have accumulated. I have some 1/700 waterline warships depicting WW II era subjects, 1/144 airliners with some duplication, and a large number of 1/72 aircraft depicting subjects from the 1935-45 era. There is a fair amount of duplication as I was collecting enough of each type to depict each air force it served with; a massive project and far from complete. I'm asking \$3500 for the collection plus shipping. This is still much below current retail." Scott Manke (SAFCH #1425). moscapoet@gmail.com.

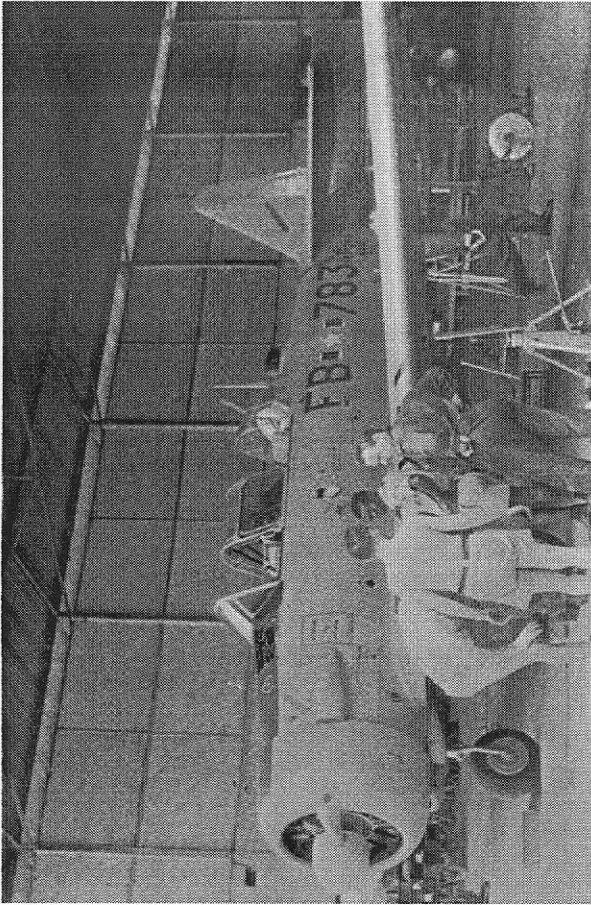
Disposal: *Markings of the 56th Fighter Group:* Draft text, thirty-six 35-mm negatives (P-51s and P-47s), and official sketches of markings dated 17 Oct 1944. These are part of a project that I started in 1985, but never got around to finishing. It would be a shame to throw this away, so it is available for the cost of postage. Contact Jim at the editorial office at either of the addresses listed on masthead of this issue of SAFO.

Disposal: Wright Flyer. "Rubber band powered with twin propellers. Wing span 19"(490mm), length 20"(500mm), and height 6". This large-scale plane assembles in about 40 minutes and then

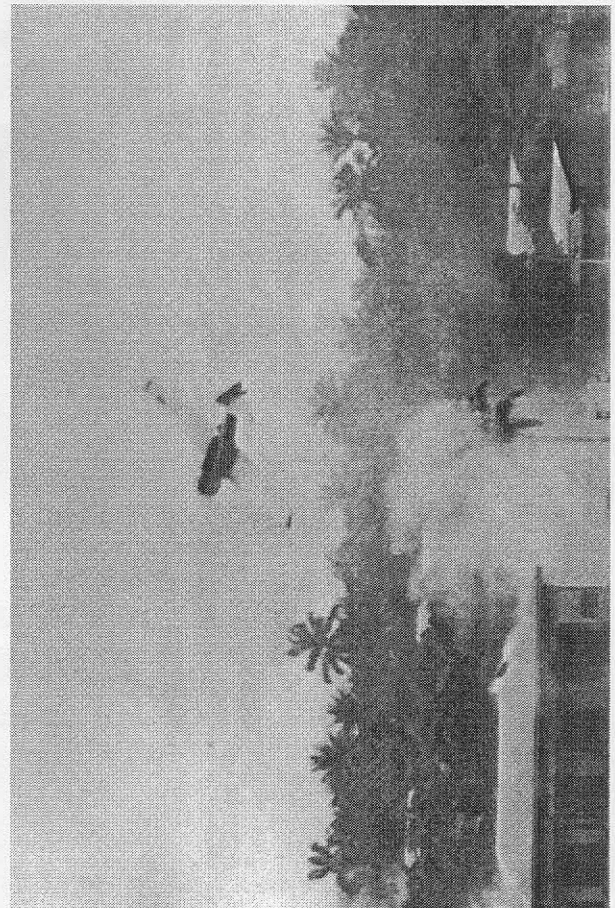
the fun really begins. A unique ball bearing propulsion mechanism is powered by heavy-duty rubber bands wound by a special electric winder. Flights can reach the same distance as the original- about 120 feet (36M). 4 AA batteries required for Electric Winder." Produced by White Wings, their online catalog www.whitewings.com says it cost \$37.00, but it is out of stock. This kit, in an unopened box, is available for \$37.00 plus postage. Contact Jim at the editorial office at either of the addresses listed on masthead of this issue of the SAFO.



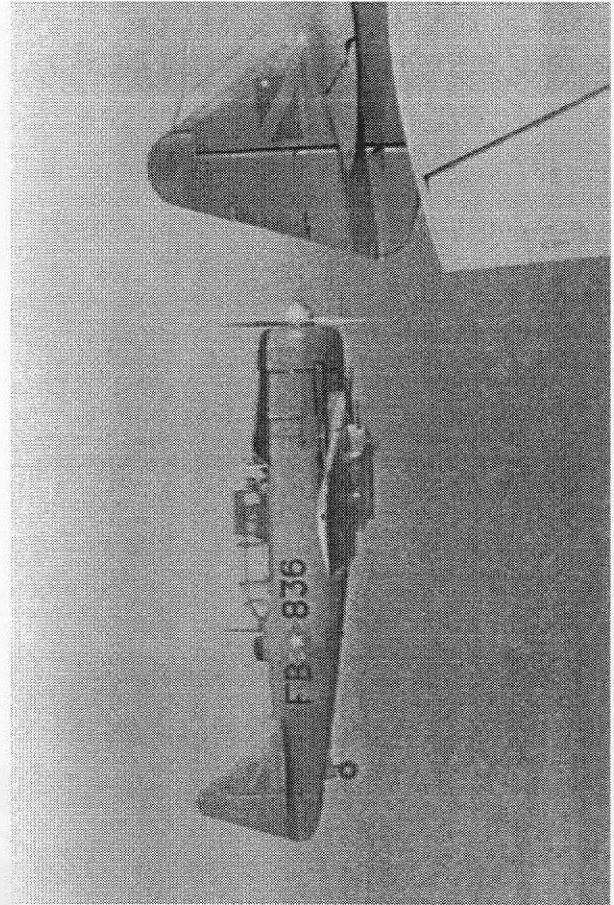
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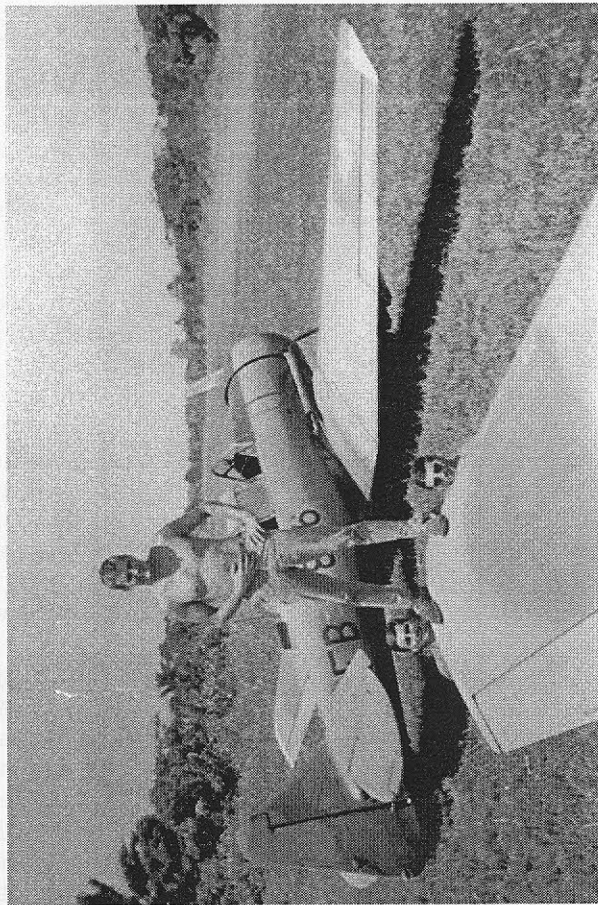
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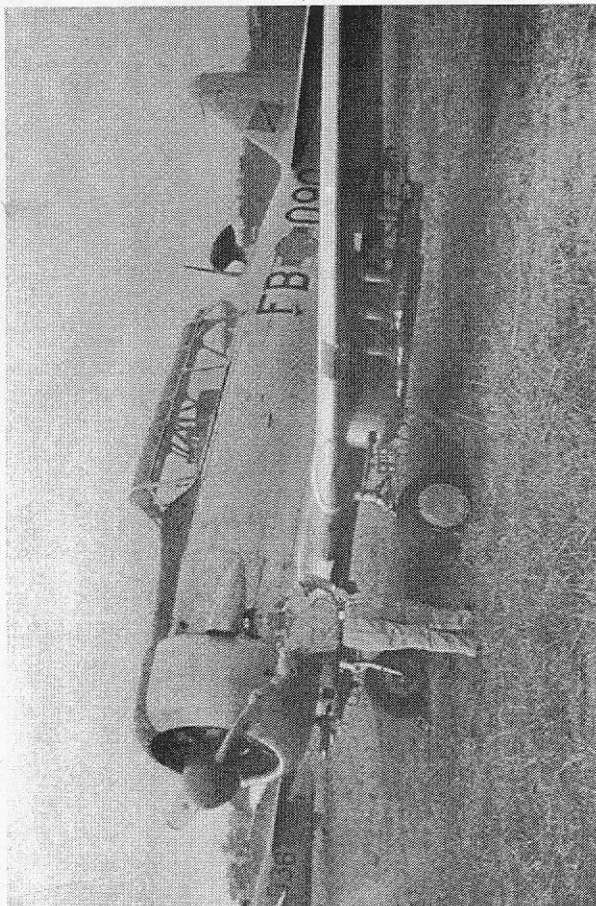
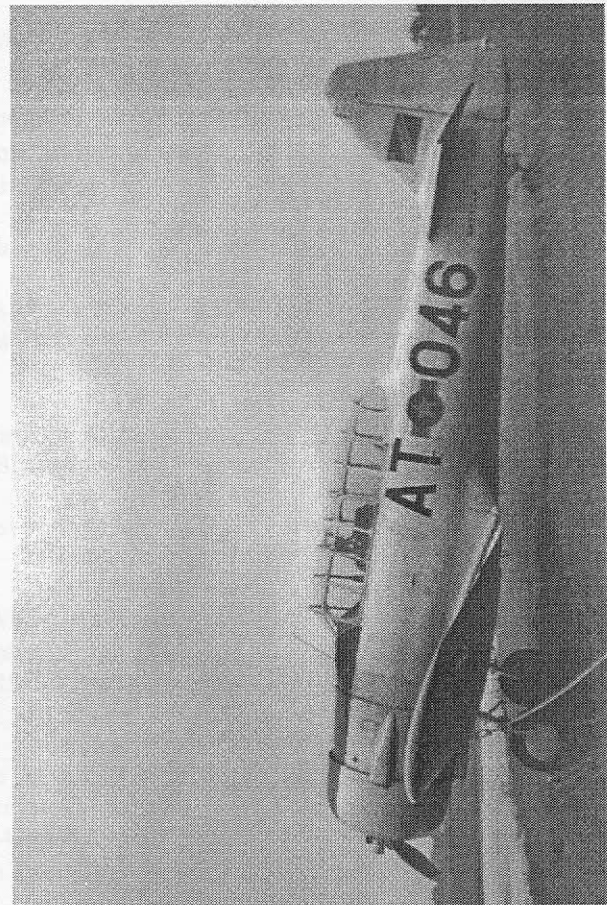
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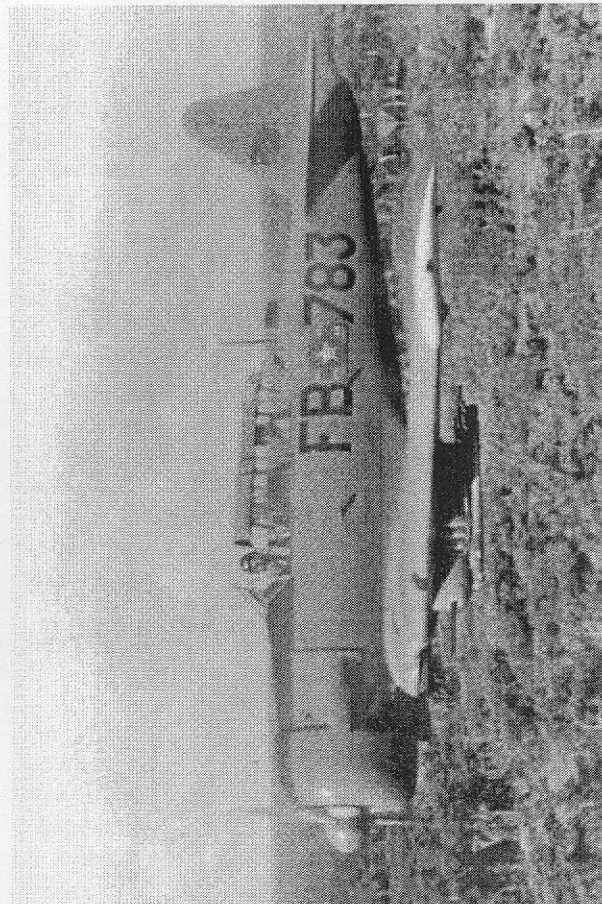
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